

UNIVERSITY OF
ILLINOIS LIBRARY
AT URBANA-CHAMPAIGN

NATURAL HISTORY SURVEY

I
68
3

Nat Hist Sur

FIELDIANA Zoology

Published by Field Museum of Natural History

Volume 68

Review of the
Pselaphid Beetles
of the West Indies
(Coleoptera: Pselaphidae)

ORLANDO PARK 1901-1969
JOHN A. WAGNER
AND
MILTON W. SANDERSON

November 12, 1976

NATURAL HISTORY SURVEY
DEC 6 1976
LIBRARY





FIELDIANA: ZOOLOGY

A Continuation of the

ZOOLOGICAL SERIES

of

FIELD MUSEUM OF NATURAL HISTORY

VOLUME 68



FIELD MUSEUM OF NATURAL HISTORY
CHICAGO, U. S. A.

REVIEW OF THE
PSELAPHID BEETLES OF THE
WEST INDIES
(COLEOPTERA: PSELAPHIDAE)

FIELDIANA

Zoology

Published by Field Museum of Natural History

Volume 68

Review of the

Pselaphid Beetles
of the West Indies,
(Coleoptera: Pselaphidae)

ORLANDO PARK 1901-1969

JOHN A. WAGNER
Kendall College
Evanston, Illinois

MILTON W. SANDERSON
Illinois Natural History Survey,
Urbana, Illinois

November 12, 1976

Publication 1240

Library of Congress Catalog Card Number: 76-8309

US ISSN 0015-0754

Printed in the United States of America

TABLE OF CONTENTS

Preface.....	IX
Introduction	1
Systematic Treatment	4
Checklist to the West Indian Fauna	75
Type Depositions of New Species	80
Summary.....	81
References.....	82
Index.....	87

PREFACE

The Orlando Park collection of pselaphid beetles, together with his files and library of books and reprints dealing with the family were left to Field Museum by bequest. The collection had been moved to the museum in 1968, upon his retirement from Northwestern University. After his death in the fall in 1969, his files and library of books and reprints pertaining to the Pselaphidae were also moved there.

Professor Park had been working on a study of West Indian Pselaphidae for some time, and he had completed the descriptions, keys, and drawings. Type material had been labelled by him, and some identified borrowed specimens had been returned.

With some knowledge of the family Pselaphidae in the New World, we agreed to rearrange the manuscript to conform to the general format of *Fieldiana*. We have emended his keys and descriptions where necessary, and have added a summary, checklist, citations to literature references, and an index. The original title was changed to indicate the coverage as more in the nature of a review than a revision. Dr. Park had intended to include sections on zoogeography and phylogeny, but, unfortunately, he had not begun these. We have made no attempt now to treat subjects which only Dr. Park could have done adequately. We believe that the emendations do not detract from the general usefulness of the report.

JOHN A. WAGNER
Kendall College, Evanston, Illinois

MILTON W. SANDERSON
Illinois Natural History Survey, Urbana, Illinois

INTRODUCTION

The West Indies lie in an arc extending some 1,800 miles long from the Serpent's Mouth (between South America and Trinidad) to the Yucatan Channel (between Cuba and Mexico) on the west, and the Straits of Florida (between Cuba and Florida) on the north.

They are comprised primarily of three island groups. These are the Bahamas on the northeast, the Greater Antilles southward, and the Lesser Antilles on the southeast (fig. 1). The Bahamas are flat whereas the Antilles are relatively mountainous. Coral reefs dot the eastern rim of this island chain, especially among the Bahamas, where new land is forming. There is a great differential in off-land depth of the seas. Thus in the Gulf of Batabanó, between Cuba and the Isle of Pines, the water is so shallow that the bottom may be seen; off the northwest coast of Puerto Rico there is an abyss, the Milwaukee Deep, of some 9,220 m. A more extensive account can be found in Roberts (1940).

Several important physical and ecological factors probably have exerted an important influence on the dispersals and/or population sizes of species of pselaphid beetles in the past and continuing into the present. Such factors include (1) the possibility of land bridges, short and long. If such existed in the historical past they could be utilized by population fragments walking to their present locations. Such movements would be slow, from one available habitat niche to another; random as to direction; presupposing long intervals of time.

(2) The Antillean marine currents may have been important. Such currents include (a) the Caribbean Current westward from the Atlantic Ocean, through numerous passages between the islands of the Lesser Antilles; (b) Florida Current, a warm marine river, moving northwest and north at about 4 miles an hour through the Straits of Florida; (c) the Antilles Current which flows northwestward on the Atlantic side of the Bahamas. Such currents, and other minor ones, may have contributed pselaphids from one island to another, or from the Spanish Main to an island, by rafting.

Such dispersal by natural rafts could have happened through geological time, at least over the last 40 million years (Oligocene) into the present. Since pselaphids are predators, and of relatively small size, quite a few could survive on a small floating mass of debris if the latter contained such organisms as small fly larvae, mites, or Collembola. General ecology, including foods, has been summarized by Park (1964, 1965). In recent times such possible dispersals by rafting probably would be west and northwest from South America on the Caribbean Current and the Antilles Current, and northeast from Yucatan toward Florida and Cuba. Both the Florida Current and Antilles Current would tend to converge near the Bahamas and extreme southern peninsular Florida, forming the Gulf Stream.

(3) Hurricanes. Even this name is West Indian, named for the Carib god, Huracán. On the average about 14 hurricanes occur between late June and early November, several of which are severe each year. These storms originate in the Atlantic just north of the equator, wax in wind velocity from 75 to 150 miles per hour and are accompanied by heavy rains. They work an erratic course through the Caribbean region and may blow small arthropods into new habitats. Pselaphidae are not usually regarded as strong fliers and any individuals exposed, or air-borne during such a period would be available for automatic transfer, possibly for many miles.

Additionally, the general wind pattern might disperse some of these beetles. Such winds are the northeast trades which are preponderantly northeast in January and west in July. Such recurrent winds in recent times could be subtractive rather than additive for pselaphids of the West Indies, except with the proviso that there would be a chance of wind-transport from the Leeward Islands westward, and from Puerto Rico to Hispaniola, Jamaica, and Cuba, and from the Bahamas toward extreme southern Florida and Cuba.

(4) Volcanic action and earthquakes. The Antilles south of the Tropic of Cancer have been and probably will continue to be subject to earthquakes. Furthermore, Mont Pelée of Martinique and the closely associated peaks of nearby islands should be noted here for volcanic disturbances. These latter are sporadic but may be locally important in disturbance of pselaphid populations.

(5) Activities of man. As the human population increases in size direct and indirect effects on the local pselaphid populations are

probable. Such effects would be generally adverse since pselaphids are primarily inhabitants of top-soil and floor molds. Urban and suburban sprawl, agriculture, and industry would tend to have a subtractive force, and lead to reduced populations or local extinction of these beetles. This would be hastened where soil erosion was involved. An exception might be the multiplication by man of a suitable pselaphid habitat through unconscious co-operation, e.g., in the West Indies where banana plantations are operated, fallen banana leaves tend to accumulate a variety of pselaphid genera.

The West Indian pselaphid fauna is poorly known. The present report adds to our information but also serves to bring up to date the extent of our ignorance. A preliminary analysis was included in a general Neotropical study (Park, 1942). In later reports the author has received a loan of pselaphids from South Bimini Island in the Bahamas through the courtesy of Dr. Mont A. Cazier, American Museum of Natural History (Park, 1954a); a gift of pselaphids from Jamaica by Dr. Peter F. Bellinger (Park, 1955); additional pselaphids from Jamaica were given by Dr. Bellinger and Dr. C. Clayton Hoff (Park, 1960).

Other material has been received and has added to our information. Much of this is being reported upon here. It includes the gift of a small but choice collection by Dr. Glenn E. Haas, United States Public Health Service, from Puerto Rico; a gift of a larger collection from numerous areas of the Antilles by the Rev. E. J. Pearce, of the Barbados; the loan of material from several West Indian islands through the courtesy of Dr. Milton W. Sanderson, Illinois Natural History Survey; and, finally, the loan of a varied collection from several Antillean localities through the courtesy of Dr. P. J. Darlington, Museum of Comparative Zoology, Harvard University. In this latter instance an unique specimen, representing a new genus and species from Hispaniola, has been described previously (Park, 1954a). The author thanks Dr. Leland R. Pederson of Northwestern University for a painstaking review of the introduction of this paper and he thanks Barbara Verrier for assistance in the preparation of material and illustrations. (The editors thank Mrs. Grace Finger and Mrs. Robyn Gardner for bibliographic and indexing help).

SYSTEMATIC TREATMENT

The following keys are designed for the discrimination of genera and species and all higher taxa known to inhabit the West Indies. They will not apply necessarily to other Neotropical regions. Full references to previously described species, and West Indian type species, will be found in the checklist and references. All measurements for new species descriptions are in millimeters.

KEY TO THE SUBFAMILIES OF WEST INDIAN PSELAPHIDAE

- 1 Three-segmented tarsi, of which the first two segments are relatively very short, and the third (distal) segment is relatively long.....2
 Three-segmented tarsi, of which the first segment is very short, and the last two segments are relatively very long.....PSELAPHINAE
- 2 (1) Abdomen with five free visible tergitesFARONINAE
 Abdomen with dorsal surface composed largely of a single disc which is formed by the fusion of the first three visible tergites. CLAVIGERINAE

Subfamily FARONINAE

Faronitae Jeannel, 1949, Paris Mus. Nat. d'Hist. Nat. N. S., **29** (1), p. 15.

KEY TO WEST INDIAN TRIBES OF FARONINAE

- Antennae 11-segmented.....FARONINI
Antennae nine-segmentedPYXIDICERINI

Tribe FARONINI

Faronini Raffray, 1890a, Rev. d'Entomol., **9**, p. 82.

Genus *Caccoplectus* Sharp¹

Caccoplectus Sharp, 1887, Biol. Centr.-Amer., **2** (1), p. 22.

Type-species: *Caccoplectus celatus* Sharp, loc. cit., p. 22, Guatemala.

¹Donald S. Chandler has revised *Caccoplectus*, removed the genus from Faronini, and placed it back into Holozodini of Raffray. Chandler, D. S., A Revision of the Genus *Caccoplectus* (Coleoptera: Pselaphidae). Coleopterists Bull., **29** (4), Jan. 1976, pp. 301-316.

Caccoplectus bellingeri Park, 1955, Bull. Chicago Acad. Sci., **10** (7), p. 101. Type (male?) beaten from bushes on Morce's Gap Trail, St. Andrew Parish, Jamaica, between 1,500 and 5,000 ft. elevation.

Tribe PYXIDICERINI

Pyxidicerini Raffray, 1903, Ann. Soc. Entomol. France, **74**, p. 6.

Genus *Bythinoplectus* Reitter

Bythinoplectus Reitter, 1883, Deut. Entomol. Z., **27**, p. 37.

Type-species: *Bythinoplectus foveatus* Reitter, loc. cit., p. 37, St. Thomas, Virgin Islands.

KEY TO SPECIES OF *Bythinoplectus*

- 1 Lateral pronotal margins rounded, without distinct apical or basal angles.
bahamicus Park
- Lateral pronotal margins with distinct apical angles2
- 2 (1) Pronotal margins suddenly produced as an obtuse, lobular angle at apical
 three-fourths of length.....*acutangulus* Raffray
- Pronotal apical angles distinct and the lateral margins thence almost
 obliquely straight to base.....3
- 3 (2) Pronotum much longer than wide.....*foveatus* Reitter
- Pronotum with length and width subequal.....*laminatus* Park, n. sp.

Bythinoplectus laminatus Park, new species

Description. — *Type male:* Head 0.20 long × 0.34 wide; pronotum 0.24 × 0.24; elytra 0.33 × 0.41; abdomen 0.46 × 0.38; total length 1.24.

Cuticula light yellowish brown (apparently teneral); head and pronotum granulate-punctate, elytra finely punctulate, abdomen subimpunctate; pubescence sparse on head and pronotum, short and appressed; abdomen with longer setae.

Head with the usual median rostrum of the genus, transversely divided into a shorter frontal, and a longer vertexal portion; a pair of minute vertexal foveae, inconspicuously placed on either side of the rostral base; eyes large; tempora short and much wider than long; face deeply excavated to form the palpal fossae. These two fossae separated by a thin clypeo-frontal lamina. This lamina bears an oval, translucent window at center of base, and is erected ventrally into a bidentate process, each tooth of which bears an arcuate seta. Maxillary palpi as for genus. Convex gula with basal fovea.

Antennae 9-segmented as for genus; 1 large and granulate-punctate with dorsal face flattened and ventral face concave; 2 smaller, truncate-obconical; 3-7 subequally wide, transverse and very small; 3 briefly obconical in shape; 4-7 transverse-moniliform; 8 slightly larger, transversely obtrapezoidal; 9 large, as wide as 1, with truncate base and subovate outline, this segment bearing conspicuous special setae.

Pronotum with distinct but rounded anterior angles, and with the lateral margins thence obliquely straight to base. A nude lateral fovea near margin at basal two-fifths; a broadly subcircular nude fovea at discal center; base with a pair of narrowly separated, transversely oval nude foveae.

Elytra with rounded humeri; each elytron bifoveate near base, the sutural fovea at origin of an entire sutural stria, discal fovea at origin of a short, broad impression extending to basal fourth; flank lacking subhumeral fovea.

Abdomen with five visible tergites, the first four with strong lateral margins; first four tergites progressively slightly longer posteriorly; last tergite semicircular, about as long as second. Basal abdominal carinae present on first three tergites, separated by about 46 per cent of total segmental width and about 18 per cent of segmental length. Six visible sternites; first short; second to fourth progressively slightly longer posteriorly; fifth shorter than fourth, with an inconspicuous transverse elevation at center near base; sixth about as long as first, with a small, inconspicuous depression and posterior margin medianly concave.

Legs slender, simple; three-segmented tarsi with first tarsomere short and minute; second and third tarsomeres subequally long, the second slightly inflated and third bearing a single tarsal claw.

This species is described from one specimen, the male type, in the author's collection. It was not dissected for the aedeagus as it appears teneral, and if so the copulatory apparatus might be unsuitable for study. It was collected by Rev. E. J. Pearce on the forest floor near Pembroke, Tobago on April 22, 1965. It is most closely comparable to the type species, *Bythinoplectus foveatus* Reitter, 1883, also based on one specimen from St. Thomas, Virgin Islands, but the latter differs markedly in body proportions, the pronotum being described as much longer than wide and the elytra only slightly wider than pronotum.

Subfamily PSELAPHINAE

(Reorganized by Raffray, 1903, 1904; Park, 1942, 1951; Jeannel, 1949, 1950)

In the pselaphine tribe Brachyglutini the genus *Bythinogaster* has such narrow margins on the sides of the first three visible tergites that these latter may be overlooked, and the abdomen appear marginless. This genus can be separated from West Indian Tanypleurini by the penultimate segment of the maxillary palpi. This segment is longitudinally lenticular and bears a conspicuous pad of short pubescence on its external face.

KEY TO WEST INDIAN TRIBES OF PSELAPHINAE

- 1 All trochanters short, with the femora inserted very obliquely on the trochanters, so that each femur is quite near its associated coxa.....2

- Mesotrochanters and metatrochanters long and more or less inflated distally (clubbed), with femora inserted on the distal faces of trochanters, so that each femur is distant from its associated coxa.....5
- 2 (1) Mentum wide and largely covering the mouth and mouth-parts; cardo of each maxilla extended obliquely as an acute external projection.
JUBININI
- Mentum small, not covering mouth and mouth-parts; maxillary cardo not so formed3
- 3 (2) First three visible tergites with lateral margins.....4
- Abdomen without margins, or with the first visible tergite bearing a longitudinal carina on each sideTANYPLEURINI
- 4 (3) Venter with six or seven sternites fully visible.....EUPLECTINI
- Venter with only five sternites fully visible from side to side.
BRACHYGLUTINI
- 5 (1) Last segment of maxillary palpi wider than long, and with a slender palpal cone at apex and a distinctive appendage on its external face; general body pubescence generally in the form of flattened scales.
CTENISTINI
- Last segment of maxillary palpi otherwise formed6
- 6 (5) Last segment of maxillary palpi elongate ovoidal and apically acute, with short stiff setae and a minute apical palpal cone.....TYRINI
- Last segment of maxillary palpi with the internal face occupied in whole or in part by a broad, entire sulcus or sulcoid impression.
HAMOTINI

Tribe JUBININI

Jubinini Raffray, 1903, Ann. Soc. Entomol. France, **74**, p. 25; Genera Insectorum, **64**, p. 25.

Jubus and its allied genera (cf. Park, 1952a, p. 14) have the V-shaped or Y-shaped carinal pattern on the ventral surface of the head strongly formed. *Balega* has the ventral surface of the head bearing a median, longitudinal sulcoid impression and a pair of shorter, obliquely converging sulcoid impressions. Such impressions may be weakly formed. Between these three impressions the cuticula may be raised in weakly developed folds so that specimens of *Balega* may be incorrectly placed in *Jubus* unless this matter is realized. *Stratus* has the ventral surface of the head adorned more simply, with either a single median longitudinal sulcoid impression, or a median fovea.

(the three sulci form a furculoid impression). Occiput bearing two blackened cusps. Front occupied largely by the acetabulae of the first antennomeres, these latter being separated medianly by a subvertical frontal strap which in turn unites with the simple clypeus. Labrum transverse with a deeply concave distal margin; maxillary palpi as for genus. Ventral surface of head bisected by a longitudinal sulcoid impression which deepens anteriorly, and bears a small elongate-oval gular fovea near center; on either side of the anterior part of this impression is a short, broad sulcoid impression; these two short oblique impressions converge upon, but do not join the median impression.

Antennae long, about .72 mm.; 11-segmented with an inconspicuous club of the last four segments; 8-10 subequal in width and length; 11 nearly as long as the preceding three united, base truncate and apex rounded.

Pronotum with a lateral fovea at each side at basal fifth; extending forward from each fovea is a broad arcuate impression to about center of lateral margin; lateral foveae connected by a transverse sulcus at basal fifth; pronotal disc bisected by a longitudinal sulcus from apical fifth to transverse sulcus; a longitudinal carina extends from center of transverse sulcus to bisect basal margin; an acute spine on lateral margin opposite each lateral fovea.

Elytra with rounded humeri; each elytron bifoveate; sutural fovea at basal origin of entire sutural stria, and discal fovea at origin of poorly defined impression through basal third; these foveae more or less united by a biarcuate ridge which is more defined over each fovea; flank with a subhumeral fovea at origin of an entire longitudinal sulcoid impression, this latter bounded laterally by a carina which arches over the foveal rim.

Abdomen with five visible tergites, the four of which have broad, well-defined margins; first three subequally long and fourth distinctly longer than third tergite; fifth short and subvertical. Six sternites of which the first is short and inconspicuous, second and third subequally long, fourth shorter than third, fifth medianly shorter than fourth, sixth about as long as fourth.

Legs long and slender, relatively simple; each tarsus with a pair of claws, the lateral claw relatively large, the mesial claw slender, shorter, and set at an angle.

This new species is based on the unique male type, deposited at the Museum of Comparative Zoology. Collected by Dr. P. J. Darlington, Jr. at about 6,000 ft. elevation, near Loma Vieja, S. Constanza, Dominican Republic in August, 1936. It is set apart from other known West Indian species of the genus as a consequence of its very long head. By virtue of its relatively broad vertexal sulci it is most closely allied so far to *Balega intermedia* Park, 1960.

***Balega intermedia* Park, 1960**

Balega intermedia Park, 1960, Trans. Amer. Microscop. Soc., **79** (1), p. 5.

This species was erected on an unique female type, collected at Dolphin Head, Hanover Parish, Jamaica. A male of this species was

in material loaned to the author, and will be deposited in the Museum of Comparative Zoology. It was collected by Dr. P. J. Darlington, Jr. at Whitfield Hall, Blue Mountains, Jamaica near 4,500 ft. elevation, August 13-20, 1934.

The male differs from the female in the following particulars: (1) eyes are large, subreniform, about as long as the tempora in lateral view, and composed of about 32 coarse ocular facets; (2) antennal segment 10 distinctly longer than 9; (3) legs more robust than in the female, the femora especially more inflated.

Genus *Stratus* Schaufuss

Stratus Schaufuss, 1872, *Nunquam Otiosus*, 2, pp. 246, 452.

Type-species: *Stratus ursinus* Schaufuss, loc. cit., p. 452.

KEY TO SPECIES OF *Stratus*

Pronotum with a conspicuous antebasal spinoid tooth each side; size relatively large (2.9 mm.).....*dominicanus* Park, n. sp.
These pronotal teeth absent; size relatively small (1.5 mm.).....*hirsutus* Park, n. sp.

Stratus dominicanus Park, new species

Description. — *Type male:* Head 0.5 long \times 0.38 wide; pronotum 0.52 \times 0.55 (just apical of lateral spines); elytra 0.91 \times 1.00; abdomen 0.95 \times 0.9; total length 2.9.

Cuticula shining reddish brown; head sparsely punctulate, pronotum sparsely punctate, elytra and abdomen subimpunctate; pubescence flavous, suberect and arcuate on tempora and base of pronotum but tending to become prostrate on elytra and abdomen, setae forming an obvious fringe on posterior elytral margins and tergites.

Head with a pair of large, coarsely faceted eyes of about 36 facets, these eyes hirsute with short, bristling setae between the facets; tempora rounded and almost twice as long as eyes; a pair of nude vertexal foveae, each with the diameter of more than an ocular facet, mutually closer than either to its adjacent eye; an arcuate vertexal sulcus extending from each fovea and uniting anteriorly in a common rostral sulcus (this furculoid design is deep and the sulci slightly wider than a vertexal fovea); occiput with a pair of median cusps, these cusps separated by a broad median impression which narrows distally to a point on a line passing through posterior eye margins; ventral surface of head with a weakly developed median sulcal impression which is widened at each end and bears a circular submental fovea and a sharply defined, elongate gular fovea; maxillary palpi as for genus.

Antennae 11-segmented; segments 1-7 elongate; poorly defined club of last four segments; 8 and 9 with length and width subequal; 10 slightly longer; 11 elongate, about one-third longer than 9 and 10 united (these comparisons do not include the conspicuous antennal articulations).

Pronotum with unmarked disc; a large foveoid impression on either side at basal two-fifths, these connected by a transverse antebasal sulcus; basal two-fifths medianly interrupted by a carina from floor of sulcus to basal margin; a strong acute tooth at each side foveoid impression.

Elytron bifoveate, the basal rim of each fovea carinoid; entire sutural stria from mesial fovea, a vague discal impression for basal fifth of elytral length; flank with subhumeral fovea which is unusually posteriad in position at basal two-fifths of elytral length and a broad and deep longitudinal sulcus from fovea.

Metathoracic wings present.

Abdomen with five tergites in a median length ratio of 2.0/2.6/2.0/2.4/1.4 and first four with broad lateral margins; six visible sternites of which the first is very short and the second to sixth in a median length ratio of 2.0/2.4/2.0/1.2/1.6 and the venter simple. Legs as described for *Balega longiceps* Park, page 9.

Aedeagus 0.36 long and 0.5 deep (including the long curved distal tube). This organ dissected from a paratype (fig. 2).

Female: as described for male with the following differences: (1) small eyes of five large facets, these set in a sharply defined oval impression; (2) antennal segment 8 longer than wide and 11 about as long as 9 and 10 united; (3) tergite ratio 3.0/3.0/2.6/2.0/1.4 and sternite ratio of second to sixth 3.0/2.4/2.0/1.2/0.6 and simple.

This new species is based on a series of five specimens (three males and two females). Type male and half of the paratypes are deposited in the Museum of Comparative Zoology and the other paratypes are retained in the author's collection. The series collected by Dr. P. J. Darlington, Jr. in cloud forest near Valle Nuevo, Dominican Republic in August, 1938 at about 6,000 ft. elevation. The most closely related ally is *Stratus hirsutus* but the latter is quickly separated by the characters noted in the preceding key.

Stratus hirsutus Park, new species

Description. — *Type male*: Head 0.25 long \times 0.24 wide; pronotum 0.31 \times 0.32; elytra 0.49 \times 0.51; abdomen 0.49 \times 0.47; total length 1.5.

Cuticula shining reddish brown; subimpunctate except outer walls of vertexal sulci and submental area which are microgranulate; pubescence of head and pronotum relatively long, bristling and shaggy; on elytra and abdomen the setae are shorter and more appressed.

Head with a pair of flattened, coarsely faceted eyes of about 30 facets; vertexal foveae and sulci as noted for *Stratus dominicanus*; base of head with a pair of occipital cusps and a relatively deep median sulcus extending between these cusps from occipital margin nearly to a line through posterior eye margins; ventral surface of head with a deep median sulcus which broadens both apically and basally and bears a basal fovea.

Antennae with poorly differentiated club of last four segments; 8-10 subequal; 11 twice as long as wide.

Pronotum as for *dominicanus* except that the strong juxtafoveal teeth of the latter are obsolete in the present species. Elytra as for *dominicanus*.

Abdomen with five visible tergites in median length ratio of 2.0/1.3/1.1/1.0/0.05 and first four with broad lateral margins; six visible sternites in median length ratio of 0.3/1.3/1.3/1.0/0.05/0.05 and the venter simple. Legs as for *dominicanus* except that the accessory tarsal claw is more arcuate.

Aedeagus 0.09 long and 0.19 deep (including the long, biarcuate tube). Usually in the case of a species based on a unique male I have not dissected for the aedeagus. In this case the type was mounted on a point in two pieces, barely held together by the articulating membranes, so the above description was taken from the point-mount and then dissected and preserved on a slide (fig. 3).

Based on the male type, deposited at the Museum of Comparative Zoology and collected by Dr. P. J. Darlington, Jr. in August, 1938 at Costanza, Dominican Republic at between 3,000 and 4,000 ft. elevation. Its nearest ally is *dominicanus*. The aedeagi of *dominicanus* (fig. 2) and *hirsutus* (fig. 3) are similar generically, attesting to their obvious relationship, but these organs are very distinctive at the species level.

Genus *Jubus* Schaufuss

Jubus Schaufuss, 1872, *Nunquam Otiosus*, 2, p. 455.

Type-species: *Jubus spinicollis* Schaufuss, loc. cit. p. 456, Santa Fe de Bogota, Colombia. This genus was revised by Raffray, 1893, and Park, 1952.

KEY TO SPECIES OF *Jubus*

Vertexal sulci very narrow and the vertexal foveae not wider than the sulci, so that the sulci appear to arise *de novo* from the vertex.....*insularis* Raffray
Vertexal sulci broad; vertexal foveae large and pubescent and lie in a common excavation between the eyes.....*clavatus* Raffray

Tribe TANYPLEURINI

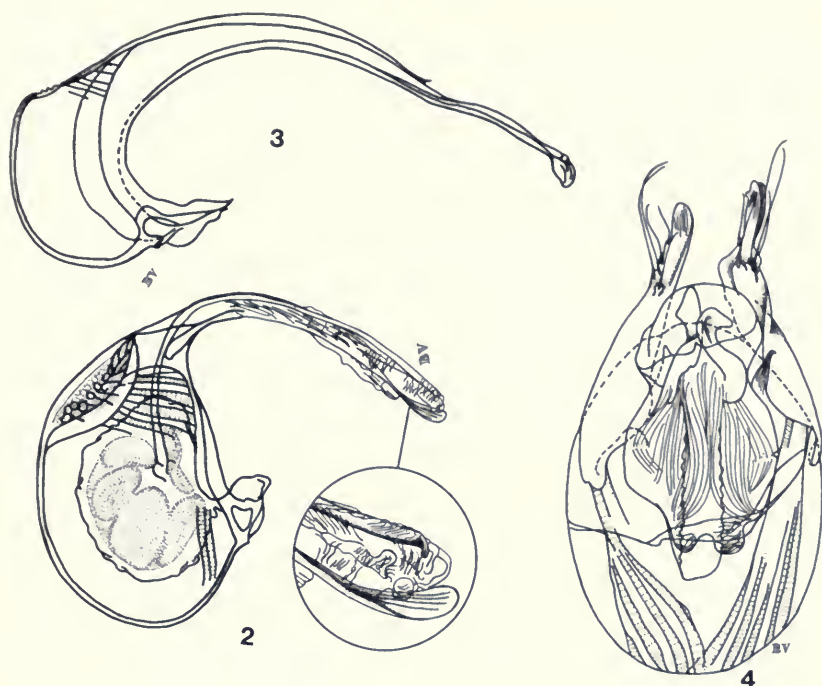
Tanypleurini Jeannel, 1949, *Mem. Mus. Nat. d'Hist. Nat.*, N. S., 29, p. 79.

KEY TO SUBTRIBES OF TANYPLEURINI

Elytron with two, three, or four antebasal foveae.....DALMODIINA
Elytron with antebasal foveae absent.....TANYPLEURINA

Subtribe DALMODIINA

Dalmodiina Park, 1951, *Geol. Surv. Alabama, Mus. Paper* 31, p. 61.



FIGS. 2-4. 2. *Stratus dominicanus* n. sp., aedeagus, left lateral face of paratype male. 3. *Stratus hirsutus* n. sp., aedeagus, left lateral face of type male. 4. *Insulomodes tobagoensis* n. g. and sp., aedeagus, ventral face of paratype male.

KEY TO GENERA OF DALMODIINA

- 1 Elytron with four antebasal fovea.....*Insulomodes* Park, n. g.
- Elytron with two antebasal fovea2
- 2 (1) Pronotal disc with a strong median longitudinal carina.*Euharmophola* Park
- Pronotal disc simply convex*Dalmonexus* Park

Insulomodes Park, new genus

Tanypleurini differing from other genera of this tribe in having in common the following features: (1) well-developed eyes in both sexes and a pair of vertexal foveae; (2) antennae 11-segmented, distantly articulated, and not geniculate; (3) 4-segmented maxillary palpi; segment 1 minute; 2 elongate, arcuate, pedunculate; 3 short, rounded-triangular; 4 largest, elongate-oval with narrowed apex bearing a palpal cone; (4) pronotum with a simple convex disc; three antebasal foveae, a lateral each side and a median, these three foveae united by an arcuate antebasal sulcus; (5) elytron quadrifoveate and flank with a subhumeral fovea; (6) abdomen with five

obconical, 4-8 subequal, subquadrate; club of last three, 9 wider than eighth, transverse trapezoidal; 10 larger than ninth, transverse trapezoidal; 11 largest segment, four times longer than 10 and a fifth wider.

Pronotum with simple convex disc; a nude lateral antebasal fovea each side and a nude median antebasal fovea, these three connected by an arcuate transverse sulcus.

Elytra with rounded humeri, each elytron with four large, nude antebasal foveae, entire sutural stria from mesial fovea; flank with a nude subhumeral fovea and an entire carina arising from the foveal rim. Metathoracic wings present.

Aedeagus 0.30 long \times 0.15 wide (fig. 4), dissected from a paratype.

Abdomen with five visible tergites in median length ratio of 2.0/1.8/1.6/1.6/1.2. No lateral abdominal margins *per se*; first tergite bearing each side two marginal carinae which extend from basal margin through basal half of tergite length, inner stria straight and outer stria sinuous; first tergite bearing a pair of basal abdominal carinae which are stout, straight and divergent, separated distally by 24 per cent of segmental width and they are 40 per cent of segmental length. Seven sternites in median length ratio of 1.4/1.0/0.8/0.6/0.4/1.2/0.8; first sternite fully visible side to side and extending well posteriad of metacoxae; third sternite bearing a small, elongate, distinctive lamina which tends to bear vertical striations and arises from center of posterior margin and is abruptly reflected anteriorly; sixth sternite bearing a median subcircular impression and posterior segmental margin medianly briefly elevated; seventh sternite transversely rounded-triangular in outline and divided obliquely and slightly asymmetrically into a right and left aedegeal plate (these two plates are articulated laterally and probably are moved laterally at copulation to allow extrusion of the aedeagus, but when these plates are appressed the line of separation may be difficult to observe).

Legs stout with femora swollen medianly and tibiae swollen distally; mesotrochanters each bearing a small, blunted, subcylindrical tooth at center of ventral face; metatibiae rather suddenly arcuate for distal third; tarsi with a single large claw.

Female: with minor proportional differences, as described for the male except for the following exceptions: (1) only six visible sternites, in median length ratio of 1.6/1.2/1.0/0.8/0.4/1.8 with the last sternite transverse and almost semicircular in outline and weakly flattened medianly; (2) no lamina on third sternite; (3) mesotrochanters not toothed.¹

Within the known population fragment of this species there is the expected amount of minor variation in size and structure. As

¹Where females are preserved with the terminal tergite and sternite sufficiently separated there is revealed a pair of weakly sclerotized rounded-triangular processes. This pair is articulated laterally and may be critically involved in clasping a part of the aedeagus during copulation. They may represent a part of the next sternite. This would be the seventh if the first six visible sternites are considered, but morphologically the first two sternites are membranous and not visible in prepared specimens, and this would indicate that the two processes of the female belong to the true ninth sternite. The pselaphid abdomen is thought of as having 10 segments by Park (1942). This view agrees with Blackwelder (1936) for Staphylinidae, and with Tanner (1927) for Coleoptera. In this case the ninth and tenth segments would be involved in the genitalia.

between males the length and degree of bluntness of the mesotrochantal spine and the size of the lamina on the third sternite varies as does also the amount of mesial flattening of the sixth sternite in females.

This species is based on four males and two females (type and five paratypes) collected by the Rev. E. J. Pearce beneath bark and in rotten log mold in the vicinity of Hillsborough Dam and Mt. Scarborough, Tobago on April 3 to 5, 1961.

Not included in the above type series are six males and six females from beneath bark on the Woodford Estate near St. John's Grenada collected by the Rev. Pearce May 5, 1962 and one male taken by the Rev. Pearce under bark on December 9, 1960 near Diego Martin, Trinidad. These 19 specimens are in the author's collection.

Since this new species is known from Grenada, Tobago, and Trinidad it is probably a member of the large mainland fauna of South America and should occur in Venezuela.

Insulomodes excavatus Park, new species

Description. — *Type Male:* Head 0.30 long \times 0.40 wide; pronotum 0.36 \times 0.43; elytra 0.55 \times 0.76; abdomen 0.81 \times .68; total length 1.7.

Head with small, short but deep flattened eyes of about 26 facets; tempora rounded and as long as eyes; vertex, front, labrum and ventral surface of head as for *I. tobagoensis*; maxillary palpi as for genus.

Antennae 11-segmented, distantly articulated, segments 1-4 as for *tobagoensis*; 5-10 progressively more transverse and progressively produced mesially; 11 about as long as 7-10 united (antennal description checked against a paratype slide-mount at 430 diameters).

Pronotum and elytra as for *tobagoensis*. Metathoracic wings present.

Abdomen with five visible tergites in median length ratio of 2.2/2.2/2.2/2.4/2.8 with no lateral margins *per se*, the lateral carinae as for *tobagoensis* but heavier; first tergite with basal abdominal carinae strong and very divergent, 33 per cent the length and separated by 33 per cent the width of segment; last tergite vertical, rounded trapezoidal. Seven sternites in median length ratio of 1.2/1.2/0.8/0.4/0.2/2.4/1.2 with sixth sternite complex: median half of sternite deeply subcircularly excavated, with a small median tumulus at basal margin and a small rounded cusp on distal margin set obliquely each side of excavation and projecting obliquely above this cavity; seventh sternite divided obliquely into a right and a left aedeageal plate, articulated laterally for extrusion of aedeagus (in a slide mount of a paratype male the distal rim of the excavation, between the cusps, is bounded by a row of small, distinctive tubercles seen clearly at 430 diameters).

Legs strong, femora medianly swollen; tarsi as for *tobagoensis*; all tibiae thickened distally; mesotibiae suddenly angulated at center and the point of

angulation concave ventrally; mesotrochanters not toothed; metacoxae distantly articulated; metatibiae slowly arcuate mesially for distal third.

Female generally similar to male with the following exceptions: (1) only six visible sternites in median length ratio of 1.2/1.0/0.8/0.6/0.4/2.4 with the sixth twice the length of first and rounded-ogival in perimeter, from a direct dorsal view this sixth sternite has a narrowly elongate-triangular foveoid impression for basal third; (2) mesotibiae normally arcuate.

Described from five males and four females collected by Rev. E. J. Pearce between April 3 to 5, 1961 in Tobago. The type male and three paratype females were taken under bark at Hillsborough Dam. Four males, including one teneral, and one female, all paratypes were taken in a rotten log at Mr. Scarborough. Type and paratypes in the O. Park collection.

Genus *Euharmophola* Park

Euharmophola Park, 1960, Trans. Amer. Microscop. Soc., **79** (1), p. 23.

Type-species: *Euharmophola carinata* Park, loc. cit., p. 23.

***Euharmophola carinata* Park, 1960, Jamaica (rotting log mold, 12 miles south of Falmouth, Trelawny Parish, Cornwall County).**

Genus *Dalmonex* Park

Dalmonex Park, 1942, Northwestern Univ. Stud. Biol. Sci. Med., **1**, p. 272.

Type-species: *Dalmonex seeversi* Park, loc. cit., Barro Colorado Island, Panama.

***Dalmonex tobagoensis* Park, new species**

Description. — *Type male:* Head 0.26 long \times 0.34 wide; pronotum 0.27 \times 0.38; elytra 0.46 \times 0.58; abdomen 0.39 \times 0.52; total length 1.4.

Cuticula shining reddish-brown, subimpunctate with sparse bristling, suberect pubescence.

Head with a pair of rather small, subcircular eyes of about 28 small facets; eyes inconspicuous from above being set far down on genae and on a line with mandibular articulations, this lateral view shows the tumid vertex seen as a high, rounded tumulus. Head from dorsal view relatively complex: a median vertexal carina crosses occiput to basal portion of vertex; tumid vertex bears medianly in apical portion a shallow, glabrous depression; apical of this depression the vertex is abruptly transversely excavated to the interantennal line of the front; this frontal wall bears medianly a mat of very short, golden setae arranged in two confluent triangular masses and this wall is undercut each side; distal floor of excavation slightly higher medianly and the floor drops abruptly beyond antennal articulations to form a short, simple fronto-clypeal strip; labrum with distal margin suddenly expanded laterally; ventral surface of head simply convex with a broad basal foveoid depression; maxillary palpi as for genus.

Antennae 11-segmented, distantly articulated; segment 1 relatively large and elongate; 2 smaller, elongate; 3-7 subequal, submoniliform; 8 slightly wider, slightly transverse; club of last three segments; 9 larger than eighth, transverse trapezoidal; 10 larger than ninth, transversely trapezoidal; 11 largest segment, as long as 7-10 united.

Pronotum with each lateral margin incised near basal third, a lateral fovea in this incisure and these two antebasal foveae united by an arcuate sulcus; disc simply convex.

Elytra bifoveate, entire sutural stria from sutural fovea and a vague, short discal impression from discal fovea; flank not foveate but bearing a carina for apical half of length. Metathoracic wings present.

Abdomen with five visible tergites in median length ratio of 2.4/1.0/1.0/1.0/1.2/. No lateral margins *per se* but first tergite with two strong, straight, subentire lateral carinae each side and second and third tergites with one entire carina each side. Six visible sternites in median length ratio of 0.8/1.0/0.4/0.2/0.2/1.2, sixth sternite punctulate and with a small foveoid depression at apical margin; first sternite fully visible beyond thorax.

Pro-, and mesosterna not carinate medianly; metasternum medianly, longitudinally sulcoid.

Legs relatively heavy and femora swollen medianly; mesotrochanters each with a short, stout tooth at lateroventral angle; metatibiae arcuate in apical third; tarsi with a single claw.

Female: generally as for male except that (1) the vertex normally convex, so that the median, longitudinal carina from the occiput curves briefly on the base of the vertex; vertex-frontal area simple, so that the pair of vertexal foveae are clearly visible, one at base of each antennal incisure, and these foveae connected by a broadly arcuate sulcus; (2) antennal segment 10 transversely ovoidal; 11 not as long, in a ratio of 1.6/2.0 as for the male, but still as long as preceding four segments united; (3) six sternites in median length ratio of 0.8/1.2/0.4/0.6/0.6/1.2 with sixth sternite weakly depressed at center of base; (4) mesotrochanters not toothed.

Description based on one pair (type and paratype) in author's collection. Collected by Rev. E. J. Pearce under bark on April 5, 1961 at Hillsborough Dam, Tobago. The only ally is *D. seeversi* Park (1942, p. 272) from Barro Colorado Island, Panama Canal Zone, but the male *seeversi* has a much more complex vertexal-frontal area with only the median part of the vertex uncarinated, and the female *seeversi* is unknown.

Subtribe TANYPLEURINA *sensu strictiore*

Tanypleurina Jeannel, 1949, Mem. Mus. Nat. d'Hist. Nat., N. S., **29**, p. 79.

KEY TO GENERA OF TANYPLEURINA

Elytral flank with a subhumeral fovea.....*Buris* Fletcher
Elytral flank with subhumeral fovea absent.....*Bythinophysis* Raffray

Genus **Buris** Fletcher

Buris Fletcher, 1928, Ann. Entomol. Soc. Amer., **21**, p. 227.

Type-species: *Buris brunneus* Fletcher, loc. cit., Vera Cruz, Vera Cruz, Mexico.

Buris ensipes (Raffray), 1891, Ann. Soc. Entomol. France, ser. 6, **10**, 316. Described from San Esteban, Venezuela. Our records are from Trinidad, and Antigua, Leeward Islands. This species was described in the genus *Dalmodes* Raffray (1908, p. 39). [Park, 1942, placed *ensipes* in *Bythinophysis*, but now places it in *Buris*. J.W. — M.W.S.]

Genus **Bythinophysis** Raffray

Bythinophysis Raffray, 1908, Genera Insectorum, **64**, p. 266.

Type-species: *Bythinophysis punctipennis* Raffray, loc. cit., p. 266, Cayenne, French Guiana.

Bythinophysis humilis (Raffray), 1908, Ann. Soc. Entomol. France, **77**, p. 39. Guadeloupe, Leeward Islands. This species was described in the genus *Dalmodes*.

Tribe **EUPLECTINI** *sensu latiore*

Euplectini Park, 1942, Northwestern Univ. Stud. Biol. Sci. Med., **1**, p. 63.

KEY TO SUBTRIBES OF EUPLECTINI

- | | | |
|-------|--|---|
| 1 | Front of head prolonged into a conspicuous elongate rostrum, with antennae articulated at distal end of rostrum and subcontiguous. | RHINOSCEPSINA |
| | Front not as described | 2 |
| 2 (1) | Tarsi with two claws, a large primary claw and a short accessory claw. | TROGASTRINA |
| | Tarsi with either a single claw, or a claw and an accessory seta | 3 |
| 3 (2) | Mesocoxae well separated; the coxal cavities separated by distinct processes from the meso-, and metasternum | PANAPHANTINA |
| | Mesocoxae contiguous, the coxal cavities confluent | 4 |
| 4 (3) | Prosternum longitudinally bisected by a median carina. | BIBLOPORINA |
| | Prosternum not bisected by such a carina or a carinoid fold | 5 |
| 5 (4) | Antennae with club formed by the last three or four segments. | EUPLECTINA <i>sensu strictiore</i> ¹ |

¹Two Antillean genera, *Latomelba* and *Hanfordia*, have an intermediate antennal club and might be placed in either Euplectina or Trimiina on this character. Because they have gular capitate setae and other features they are assigned to the Trimiina, *q. v.*

Antennal club formed by the last segment only, segment very large and as long as the preceding three to six segments united.....TRIMIINA (see footnote p. 19)

Subtribe RHINOSCEPSINA

Rhinoscepsina Bowman, 1934, Pselaphidae of N. Amer., p. 144.

Genus *Rhinoscepsis* LeConte

Rhinoscepsis, 1878, Proc. Amer. Phil. Soc., 17, p. 382.

Type-species: *Rhinoscepsis bistriatus* LeConte, loc. cit., Florida, U.S.A.

Rhinoscepsis insularis Park, 1955, Bull. Chicago Acad. Sci., 10 (7), p. 105. Described from Morce's Gap, St. Andrew Parish, Surrey County, Jamaica, 5,500 ft. elevation.

Subtribe TROGASTRINA

Trogastrina Jeannel, 1949, Mem. Mus. Nat. d'Hist. Nat., N. S., 29, p. 75.

KEY TO GENERA OF TROGASTRINA

- Pronotal disc bisected by a deep longitudinal sulcus; each lateral margin bearing six teeth.....*Eurhexius* Sharp
 Pronotal disc with a hardly discernible median longitudinal impression; lateral pronotal margins crenulated only.....*Rhexinia* Raffray

Genus *Eurhexius* Sharp

Eurhexius Sharp, 1887, Biol. Centr.-Amer., 2 (1), p. 41.

Type-species: *Eurhexius vestitus* Sharp, loc. cit., Panama.

Eurhexius incertus Park, new species

Description. — *Type measurements:* Head 0.24 long \times 0.38 wide; pronotum 0.38 \times 0.41; elytra 0.48 \times 0.61; abdomen 0.55 \times 0.58; total length 1.6.

Cuticula shining reddish brown throughout, sparingly punctulate and with appressed pubescence.

Head very transverse with prominent eyes which are subcircular in lateral view and about twice as long as the tempora; temporal angles rounded; a median longitudinal sulcus from occiput to a line through eye-centers on vertex; usually pair of mutually distant small tubercles on occipital margin; pair of mutually distant vertexal foveae connected by a broadly arcuate sulcus; fronto-clypeal area simple and punctures larger; mandibles stout; maxillary palpi as for genus; ventral surface of head bearing longer, bristling genal setae; deeply concave in center of gular area and from this region a median longitudinal carina extends to basal margin of the mouth.

Antennae 11-segmented, distantly articulated; segment 1 elongate, subcylindrical; 2 subcircular, as wide as first but one-fifth as long; 3-6 subequal in width, very transverse-moniliform, about twice as wide as long; 7 and 8 slightly wider, transverse-moniliform; well-developed club of 9-11; 9 twice as wide as eighth, transverse-trapezoidal; 10 larger than ninth, twice as wide as long; 11 largest segment, slightly more than twice as long as wide and about as long as 8-10 united.

Pronotum orbicular, deeply bisected by an entire longitudinal sulcus; an arcuate sulcus uniting a median and a large lateral antebasal fovea each side; lateral margins each with six teeth, these teeth becoming smaller distally.

Elytron antebasally quadrifoveate with entire sutural stria but no subhumeral fovea. Metathoracic wings present.

Abdomen with five visible tergites in median length ratio of 2.4/1.4/1.4/1.6/1.2 with the fifth sternite vertical and the first four bearing strong lateral margins. Six visible sternites, the first bearing distally an especially strong row of prostrate setae; these six sternites in median length ratio of 1.0/2.0/1.2/0.8/0.6/0.6 and medianly at base of third to fifth sternites is a very small glabrous area.

Legs unmodified except for the usual lamina found in the genus in both sexes at distal three-fourths of ventral face of profemora; tarsi as for genus, with a strong primary claw and a shorter secondary claw.

Described on a unique specimen collected by Rev. E. J. Pearce under bark on April 5, 1961 at Hillsborough Dam, Tobago. The type in author's collection. The sex of the type is uncertain. The rather large eyes, distinctly longer than the tempora suggest a male, but not invariably so in the genus. On the other hand, the length ratio of the fifth and sixth sternites suggest a female. The species is most closely allied to *hambletoni* Park (1952) from Vicosá, Minas Gerais, Brazil. Both sexes are known for this latter species, and the female *hambletoni* is quickly differentiated from *incertus* since, among other features, it has obliquely suboval eyes and the fifth sternite is from one-half to two-thirds as long as the sixth sternite. The male *hambletoni* has eyes only as long as tempora, and the fifth sternite is only about one-eighth the length of the sixth sternite.

Genus *Rhexinia* Raffray

Rhexinia Raffray, 1890a, Rev. d'Entomol., **9**, pp. 104, 106.

Type-species: *Rhexinia angulata* Raffray, loc. cit., p. 196, New Grenada, (Colombia?)

***Rhexinia versicolor* Raffray, 1908, Ann. Soc. Entomol. France, 77, p. 37, Guadeloupe, Leeward Islands**

Subtribe PANAPHANTINA

Panaphantina, Jeannel, 1950, Lechevalier, Paris, p. 76

KEY TO GENERA OF PANAPHANTINA

- Mesocoxae distant, separated by subtruncate, contiguous processes of mesosterna and metasterna; elytron trifoveate; male with seven visible sternites *Thesium* Casey
 Mesocoxae narrowly separated by distally rounded and overlapping processes of mesosterna and metasterna; elytron quadrifoveate; male with only six visible sternites *Thesiectus* Park

Genus *Thesiectus* Park

Thesiectus Park, 1960, Trans. Amer. Microscop. Soc., **79** (1), p. 8.

Type-species: *Thesiectus probus* Park, loc. cit., p. 9.

***Thesiectus probus* Park.** Collected from a rotten log, 12 miles south of Falmouth, Trelawny Parish, Jamaica.

Genus *Thesium* Casey

Thesium Casey, 1884, Philadelphia, Penn., pp. 94, 117.

Type-species: *Thesium cavifrons* (LeConte), designated by Bowman, 1934, Pselaphidae of N. Amer., p. 144, Penn.? Eastern North America.

In this genus the males have seven sternites, the seventh being an ovoidal to circular aedeagal plate whereas the females have only six sternites.

KEY TO SPECIES OF *Thesium*

- 1 Pronotal disc bearing a subcircular small fovea about its own diameter from the apical pronotal margin *affabilis* Park
- Pronotal disc bearing an elongate-oval fovea which is much larger, occupying the median half or more 2
- 2 (1) First antennal segment triangular in cross-section, the mesial and lateral surfaces strongly obliquely flattened to form a fine dorsal edge, this edge elevated into a laminoid wing *antennalis* Park
- First antennal segment not as described 3
- 3 (2) Antennae exceptionally stocky with tenth segment three times wider than long *pearcei* Park, n. sp.
- Tenth antennal segment not this transverse 4
- 4 (3) Male with frontal declivity opaque, subgranulate and bearing at its apical tip a membranous horn or a horn-like tuft of recurved setae.
cornutum Park
- Male with frontal area quite different: bearing a relatively large circular, glabrous depression in the center of which is a small penicillate process which projects anteriorly *frontalis* Park

***Thesium pearcei* Park, new species**

Description. — *Type male*: Head 0.16×0.22 wide; pronotum 0.19×0.23 ; elytra 0.29×0.34 ; abdomen 0.34×0.30 ; total length 0.98.

Cuticula uniform yellowish brown; subimpunctate; sparse pubescence, being longer and less appressed on abdomen.

Head with prominent eyes one-third longer than rounded tempora; vertex with a pair of pubescent foveae united by an angulated sulcus which terminates at base of the elevated frontal margin; face declivous between antennal acetabulae and the declivity bisected medianly by a carina, the tip of which is seen as a minute tubercle on frontal margin; ventral surface of head with submental area microgranulate; maxillary palpi as for genus.

Antennae 11-segmented, articulated on either side of frontal rostrum; segment 1 subquadrate, simple; 2 shorter than first and subquadrate; 3 to 10 increasingly transverse, the club of 10 and 11 only; 10 very transverse, three times wider than long; 11 largest segment, five times longer than tenth and terminating in a very short conoidal apex. In general the antennae are exceptionally stocky and segments 3 to 10 unusually wider than long.

Pronotum slightly narrowed at base and apex and only slightly wider than head; lateral margins crenulated; a pubescent lateral fovea each side, set in a larger depression; a median nude foveoid depression; these three areas united by a transverse antebasal sulcus, but this sulcus interrupted each side, between lateral fovea and median depression by tubercle; disc with a large, elongate oval foveoid impression from near apical margin almost to the transverse sulcus.

Elytra with well-developed, rounded humeri; elytron trivoeate, the foveae pubescent; sutural stria entire; sutural and discal foveae approximate and separated from humeral fovea by a longitudinal plicoid fold; impression from humeral fovea extending through basal half of elytral length; flank with a pubescent subhumeral fovea and a carinoid line at apical four-fifths. Metatathoracic wings present.

Abdomen with five visible tergites, the first four bearing strong lateral margins; median length ratio of 1.0/1.0/1.0/1.0/0.8 and last tergite vertical. Seven sternites visible, in median length of ratio of 0.6/1.0/0.8/0.8/0.2/0.4/1.0 with six medianly concave and seventh an asymmetrically articulated, ovoidal aedeagal plate.

Prosternum medianly bisected by a carina and mesocoxal cavities well-separated by sternal process, as usual in genus; metasternum bearing a narrow Y-shaped impression, each arm in the Y extending to mesocoxal cavity. Legs simple, with tarsi bearing a single large claw.

This species is based on a single male, the type in author's collection. It was collected by Rev. E. J. Pearce, in whose honor it is named, under a board on April 5, 1961 at Hillsborough Dam, Tobago. In a key based on study of type specimens (Park, 1952b, pp. 115-116) of species known from the Neotropical Region, *pearcei* keys out with *nocturnal* Park (1952b, p. 117) from near Mexico, D. F. but these two species are very different from one another. This *nocturnal* has the lateral pronotal margins coarsely and obviously crenulated and antennal segments 3 to 10 relatively slender and less

transverse, whereas *pearcei* has the lateral pronotal margins just discernibly microcrenulate and antennal segments 3 to 10 transverse progressively to the tenth which is three times longer than wide.

Furthermore, this 1952 key was published when the genus *Thesium* was unknown from the West Indies. Since then four species of the genus have been described from Jamaica (Park, 1955, 1960). *T. pearcei* is quickly discriminated from this Jamaican assemblage as a consequence of its unique antennae (*vide supra*); probably its nearest allies will be discovered in the large and still poorly known South American fauna.

Subtribe BIBLORINA

Biblorina Park, 1951, Geol. Surv. Alabama, Mus. Paper, **31**, p. 64

Genus *Biblomimus* Raffray

Biblomimus Raffray, 1903, Ann. Soc. Entomol. France, **72**, p. 62.

Type-species: *Biblomimus minutus* Raffray, loc. cit., p. 62, St. Vincent, (Windward Islands)

KEY TO SPECIES OF *Biblomimus*

- 1 Antennal segment 10 very transverse, twice as wide as ninth.
minutus Raffray
- Antennal segment 10 not appreciably wider than ninth but twice as long.....2
- 2 (1) Seven visible sternites, seventh ovate longitudinally.
male *impressa* Raffray
- Six visible sternites, sixth triangularfemale *impressa* Raffray

Subtribe EUPLECTINA s. str.

Euplectina Jeannel, 1949, Mem. Mus. Nat. d'Hist. Nat., N. S., **29**, p. 45

KEY TO GENERA OF EUPLECTINA

- Ventral surface of head with stout, subspiniform, strongly capitate setae.
Thesiastes Casey
- Ventral surface of head with simple, aciculate, semiappressed setae.
Euplectus Leach

Genus *Thesiastes* Casey

Thesiastes Casey, 1893, Ann. New York Acad. Sci., **7**, pp. 444, 457.

Type-species: *Thesiastes debilis* (LeConte), designated by Bowman, 1934. Pselaphidae of N. Amer., p. 144, Florida, U.S.A.

KEY TO SPECIES OF *Thesiastes*

- Relatively small (0.9 mm.); pronotal disc with a large oblong median fovea; first two visible tergites with a pair of basal abdominal carinae which bound more than one-third of discal width *liliputanus* Raffray
- Relatively large (1.2 mm.); pronotal disc with a very long, relatively narrow median fovea; basal abdominal carinae not evident..... *hopensis* Park, n. sp.

***Thesiastes hopensis* Park, new species**

Description. — *Type female:* Head 0.21 long \times 0.27 wide; pronotum 0.27 \times 0.31; elytra 0.29 \times 0.41; abdomen 0.41 \times 0.41; total length 1.2.

Cuticula shining reddish brown; head, pronotum and elytra microgranulate-punctate; pubescence appressed, longer on abdomen with fourth tergite bearing arcuate guard setae.

Head with prominent, relatively coarsely faceted eyes; tempora rounded, shorter than eyes; a pair of vertexal foveae united by an inverted V-shaped sulcus which is deepest and broader around each fovea; occiput deeply medianly sulcate; face simple and convex-declivous; maxillary palpi as for genus; ventral surface of head with abundant short capitate setae.

Antennae 11-segmented, widely separated; segment 1 subquadrate; 2 narrower than first, elongate-cylindrical; 3 to 8 much shorter, third subquadrate and obtrapezoidal, fourth to eighth as wide as third, subspherical; club well developed of last three segments with 9 transverse trapezoidal, distinctly larger than eighth; 10 larger than ninth, transverse trapezoidal, 11 largest, one-fourth longer than wide, suboviform and one-fourth longer than 9 and 10 united.

Pronotum with three antebasal foveae united by an arcuate sulcus; a sulcoid impression extends anteriorly from each lateral fovea; disc with a long median fovea from which extends a sulcoid impression nearly to the anterior margin.

Elytra with rounded humeri; elytron trifoveate with entire sutural stria and a short discal impression; flank with a subhumeral fovea and an arcuate carina which curves sharply above base of fovea and extends to posterior elytral margin. Metathoracic wings present.

Abdomen with five visible tergites in median length ratio of 1.2/1.2/1.2/1.0/1.0 with first three bearing strong lateral margins; basal abdominal carinae not evident on first two tergites; fifth tergite with a dark brown area medianly (which could be confused with a seventh sternite on casual inspection) and its posterior margin slightly indented medianly. Six visible sternites with the sixth medianly slightly extended to fit the incisure of the fifth tergite. Metasternum convex. Legs rather short with femora slightly swollen. A noteworthy feature is found on the ventral face of each profemur: a longitudinal row of about eight microtubercles, each of which bears a very short, stiff white seta.

Described from four females. Type and two paratypes in the collections of the Illinois Natural History Survey and one paratype in author's collection. Collected by H. B. Mills on May 6, 1950, in the Hope Gardens at Kingston, Jamaica. The new species is allied distantly to *T. liliputanus* Raffray, 1903, p. 543 from Grenada.

Genus *Euplectus* Leach

Euplectus Leach, 1817, Zool. Misc., 3, p. 80.

Type-species: *Euplectus nanus* Reichenbach, 1816, Lipsiae, p. 69, "Europe."

Sex can be determined by the number of sternites. Females have six visible, the last simple and subtriangular. Males have seven visible, the seventh being longitudinally divided.

KEY TO SPECIES OF *Euplectus*

- | | | |
|-------|--|---------------------------------|
| 1 | Lateral pronotal margins neither sinuate near base nor having a marginal tooth or tubercle in situation near lateral antebasal foveae. | |
| | | <i>exiguus</i> Raffray |
| | Lateral pronotal margins sinuate near base and having either a small tubercle or tooth in situation near lateral antebasal foveae..... | 2 |
| 2 (1) | Vertexal foveae with interfoveal sulcus obsolete apically; male fourth sternite evenly convex and unmodified | <i>insularis</i> Raffray |
| | Vertexal foveae united by a strong interfoveal sulcus..... | 3 |
| 3 (2) | Male fourth sternite bearing a median, transverse fossa. | |
| | | <i>illepidus</i> Raffray |
| | Male with first four sternites unmodified..... | 4 |
| 4 (3) | Male with fifth sternite transversely impressed near basal margin for median half of width | <i>gouyavensis</i> Park, n. sp. |
| | Male with fifth sternite bearing three deep, transverse impressions near basal margin, these three separated by two elevations. | |
| | | <i>episcopalis</i> Park, n. sp. |

Euplectus gouyavensis Park, new species

Description. — *Type male*: Head 0.24 long \times 0.33 wide; pronotum 0.31 \times 0.33; elytra 0.43 \times 0.41; abdomen 0.53 \times 0.43; total length 1.5.

Cuticula shining reddish brown with paler elytra; head and pronotum sparsely punctate, elytra more densely punctate; abdomen subimpunctate except seventh sternite which is obviously punctate; pubescence appressed.

Head with eyes and tempora of same length; occiput deeply notched medianly; vertex with a pair of nude vertexal foveae united by an inverted U-shaped sulcus; area enclosed by this sulcus glabrous and depressed; face subvertical and transversely recessed; labrum with distal margin concave; mandibles strong; maxillary palpi as for genus.

Antennae 11-segmented, distantly articulated; segment 1 elongate; subcylindrical; 2 smaller, quadrate; 3 to 8 smaller, third briefly obconical, fourth to seventh moniliform, eighth slightly larger, trapezoidal; club of last three segments with 9 twice as wide as long, 10 larger than ninth and twice as wide as long, 11 largest segment, one-third longer than wide and as long as 8-10 united.

Pronotum with three nude antebasal foveae united by a transverse sulcus; the median foveoid area extends to base, and continues apically to unite with the

longitudinal discal sulcus which extends to apical three-fourths of pronotal length; lateral margins incised near lateral foveae and bearing a small, blunt tooth at incisure.

Elytron trifoveate, entire sutural stria, a short discal impression for basal fifth near humeral fovea; flank with a subhumeral fovea.

Abdomen with five visible tergites, the first three strongly margined, in a median length ratio of 1.2/1.4/1.6/2.2/1.4 and widest through the third tergite; fifth subvertical; first two bearing a pair of basal abdominal carinae, with those of second divergent, 45 per cent of tergite length and separated by 25 per cent of tergite width. Seven sternites, the venter being concave in profile and in median length ratio 1.0/0.8/0.8/0.6/0.2/0.6/1.8 with the first four unmodified; fifth sternite transversely impressed near basal margin for median half of width, this very short impression extending anteriorly beneath the fourth sternite; seventh sternite divided longitudinally into a right and left aedeageal plate of which the left is slightly larger; the line of union ("pygidial carina") is slightly inclined to the morphological right side. The inclination of the "pygidial carina" to the morphological right side places *gouyavensis* in the genus *Pycnoplectus* (Casey, 1897) following the revision of the North American *Euplectus*-complex by Wagner (1975). Since not all of the Neotropical species have been studied with reference to the inclination of the "pygidial carina," and the fauna is poorly known, these species have been left in *Euplectus* for the present.

Metasternum longitudinally medianly sulcoid; legs unmodified, with femora slightly tumid medianly and tarsi with a single large claw.

Described from the unique male type, in author's collection; collected by the Rev. E. J. Pearce under bark on April 27, 1962 near Gouyave, Grenada. The nearest ally of this new species is *illepidus* Raffray also from Grenada, Windward Islands but this species has a fossa on the fourth sternite.

***Euplectus episcopal* Park, new species**

Description. — *Type male:* Head 0.22 long \times 0.31 wide; pronotum 0.31 \times 0.31; elytra 0.39 \times 0.41; abdomen 0.45 \times 0.38; total length 1.4.

Cuticula as for *gouyavensis* except that elytra are not paler.

Head with eyes one-fourth shorter than tempora; vertexal foveae and uniting sulcus as for *gouyavensis* except the enclosed area is medianly slightly elevated; face subvertical with median area not as recessed as lateral areas; labrum with concave apical margin slightly everted medianly; mandibles strong and maxillary palpi as for genus.

Antennae 11-segmented, distantly articulated; segment 1 elongate and subcylindrical; 2 smaller, slightly elongate; 3 to 6 smaller, submoniliform; 7 to 8 slightly larger; club of last three segments, with 9 almost three times wider than long, trapezoidal; 10 about the same size but shorter and slightly more than three times wider than long; 11 largest segment, as long as 8 to 10 united.

Pronotum as for *gouyavensis* the discal fovea is much shorter, elongate-oval, and occupying the median half of disc.

Elytra as for *gouyavensis*.

Abdomen with five visible tergites, first three strongly margined, in a median length ratio of 1.0/1.0/1.0/2.0/1.2 and widest through third tergite; fifth subvertical; basal abdominal carinae on first two tergites, those on second divergent, 25 per cent of tergite length and separated by 25 per cent of tergite width. Seven sternites in a median length ratio of 0.8/0.8/0.8/0.6/0.4/0.2/1.8 and concave in profile; first four sternites unmodified; fifth sternite complexly modified: the basal half bears three transverse excavations, a deep, glabrous excavation each side, and a deeper and wider median excavation; these three excavations are separated by a pair of elevations and all three extend anteriorly beneath the fourth sternite; the median excavation is setose basally. Seventh sternite as for *gouyavensis*.

Metasternum and legs as for *gouyavensis*.

Described from the unique male type, in author's collection; collected by the Rev. E. J. Pearce in a banana stalk on April 29, 1960 at Campbeltown, Tobago.

Its nearest ally is *gouyavensis* described from Grenada in this paper, but *gouyavensis* has a single, simple, very short transverse impression near base of the fifth sternite in contrast to the much more complex modifications of this sternite in *episcopalis*. Other characters separating these two new species include the eye/tempora length ratio and the length of the basal abdominal carinae of the second tergite.

Subtribe TRIMIINA

Trimina Bowman, 1934, Pselaphidae of N. Amer., p. 8.

KEY OF GENERA TO TRIMIINA

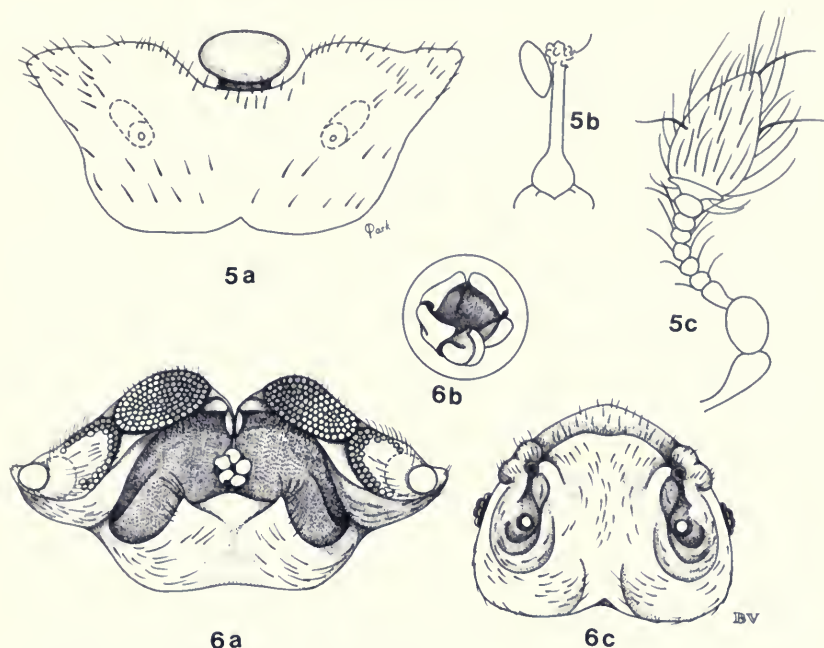
- 1 Dorsal head outline of male unique in subtribe, obviously wider than any other part of body, and large eyes wholly invisible from above. *Malleiceps* Park
- Dorsal head outline never wider than elytra in either sex.....2
- 2 (1) Both pronotum and elytra lacking foveae.....*Hanfordia* Park
- Pronotum and/or elytra bearing foveae3
- 3 (2) Metacoxae relatively distant from each other, separated by the width of their mesial articular surfaces or more at bases4
- Metacoxae subcontiguous or slightly separated at bases6
- 4 (3) Elytron with subhumeral fovea present5
- Elytron with subhumeral fovea absent*Dalmomelba* Park
- 5 (4) Basal fifth of pronotum medianly bisected by a high, laminoid carina from basal bead to transverse antebasal sulcus*Lemelba* Park
- Pronotum lacking this feature.....*Haasiella* Park, n. g.

- 6 (3) Dorsal outline of elytral humeri subdentate to dentate as a consequence of the position of subhumeral fovea and adjacent cuticula.
Actium Casey
Elytral humeri rounded, whether subhumeral foveae are present or absent.7
- 7 (6) Pronotum with lateral foveae present and mesiad of pronotal margins and (discounting pubescence) wholly visible or partially visible from a dorsal view.....11
Pronotum with lateral foveae either absent, or vestigial, or well formed, but if the latter, wholly invisible from a dorsal view and located on the flanks of pronotum.....8
- 8 (7) Flank of elytron bearing a subhumeral fovea.....9
Flank of elytron with subhumeral fovea absent.....*Melba* Casey
- 9 (8) Head slightly to obviously wider than pronotum; males (seven visible sternites, females with six visible sternites) with fourth sternite each side bearing a pair of distinctive spatulate setae.....*Latomelba* Park
Head as wide or narrower than pronotum; males (same sternite numbers as for *Latomelba*) with such spatulate setae absent.....10
- 10 (9) Head quadrate in dorsal view; males (same sternite numbers as for *Latomelba*) with head dilated distally*Quadrelba* Park
Head narrowed distally in both sexes16
- 11 (7) Vertex with the usual pair of foveae between the eyes13
In addition to the pair of interocular foveae, vertex bears a second pair, a fovea or foveoid pit slightly behind and mesad of each antennal prominence12
- 12 (11) Eyes normal, of 30 facets or more (fig. 7)*Ramelbida* Park
Eyes rudimentary, of 9 facets (fig. 6).....female *Malleocephs* Park
- 13 (11) Head through eyes slightly wider than pronotum (figs. 8, 10)14
Head through eyes not wider than pronotum*Trimiovillus* Park
- 14 (13) Antennae distantly articulated from each other15
Antennae closely articulated on a broad, short rostrum.
Sandersonella Park, n. g.
- 15 (14) Elytral flank with no trace of subhumeral fovea*Trimiosella* Raffray
Elytral flank with a subhumeral fovea or foveoid impression.
Hispanisella Park, n.g.
- 16 (10) Vertexal fovea united by an entire sulcus*Allomelba* Park
Vertexal foveae free*Zolium* Casey

Genus *Malleocephs* Park

Malleocephs Park, 1954, Nat. Hist. Misc., **138**, p. 1.

Type-species: *Malleocephs darlingtoni* Park, loc. cit., p. 1, Sanchez, Dominican Republic.



FIGS. 5-6. 5. *Malleiceps darlingtoni* Park, a, dorsal view of head of male. b, aedeagus. c, antenna (after Park, 1954). 6. *Malleiceps pearcei* n. sp., a, dorsal view of head of male paratype. b, top detail of vertexal tubercle. c, dorsal view of head of female paratype.

abdominal carinae 22 per cent of segmental length and separated by 40 per cent of segmental width; fifth tergite rounded-triangular. Seven visible sternites in median length ratio of 0.6/1.0/0.8/0.4/0.4/0.4/0.2 with third, fourth, and sixth sternites each with a median glabrous impression; fourth bearing at the extreme latero-ventral angle each side a long (0.05), hyaline, stiff slightly spatulate process (the anatomy and position of these two processes are similar to the four processes of *Latomelba quadrisicca* Park, 1955, p. 113).

Legs slender and unmodified except the ventral margins of the meso- and metatrochanters which are laminoid; tarsi with a single claw. Metasternum broadly concave; metacoxae slightly separated.

Female essentially as for male with the following exceptions: 1) head (fig. 6c) relatively simple, 0.22 long by 0.24 wide; eyes rudimentary, of nine facets, visible in dorsal view; a pair of nude vertexal foveae between eyes but these foveae not united by an interfoveal sulcus; instead a sulcoid impression extends distally from each fovea ending in a weak foveoid impression mesial of each antennal prominence (this quadrioveoid condition reminds one of the head of *Ramelbida quadrioveata* (Raffray) shown in Figure 7 but the anterior pair of pits in this latter species are much more pronounced and foveoid); rounded tempora one-fourth longer than eyes; 2) six visible sternites in median length ratio of 0.6/1.4/1.0/1.0/0.2/1.4; 3) fourth

sternite lacking special setoid processes; 4) meso- and metatrochanters simple; 5) metasternum much less concave.

This remarkable species erected on two males and two females (male type and three paratypes) in collection of the author. Collected by Rev. E. J. Pearce, in whose honor it is named, in dead leaves at 2,700 ft. elevation near Rubias, Puerto Rico on January 24, 1961.

The species is most closely allied to *M. darlingtoni* Park, but has many similarities in structure with *Latomelba* and *Trimiosella*.

To include this new species in the genus, *Malleocephs* must be emended to contain species in which the metacoxae are either contiguous or slightly separated, and to restrict the remarkably wide head to the male sex.

Hispanisella Park, new genus

Triimiina having the following combination of structural features: (1) Head slightly wider than pronotum and bearing a pair of vertexal foveae between the eyes (fig. 8); (2) maxillary palpi 4-segmented, segment 1 very small, 2 elongate-pedunculate, 3 short and rounded-triangular, 4 largest and longer than 2, elongate-conical with an oblique base; (3) antennae 11-segmented, distantly articulated from each other, tenth antennal segment bilaterally symmetrical and eleventh largest and forming the club; (4) ventral surface of head bearing aciculate setae; (5) pronotum with a lateral fovea each side, visible from a dorsal view, and connected to a median impression by a sulcoid impression, disc simply convex; (6) elytra with rounded humeri, bifoveate, and flank with a subhumeral foveoid impression; (7) males with seven sternites, the seventh a small aedeagal plate, and females with six sternites; (8) metacoxae slightly separated; (9) mesocoxae in confluent cavities; (10) tarsi bearing a single claw.

Type-species: *Hispanisella haitiana* Park, new species.

The nearest known allied genus is *Triangusella*, known from one species, *T. acuta* Park (1952) (p. 132), from tropical Veracruz, Mexico, but *acuta* has vestigial eyes of six facets in the male, vertexal foveae united by an entire interfoveal sulcus, and a much deeper subhumeral elytral fovea. In the West Indian fauna *Hispanisella* appears to be most closely allied to *Malleocephs* as a consequence of the great similarity of the aedeagi (figs. 5, 9).

KEY TO SPECIES OF *Hispanisella*

- Male head with eyes inconspicuous in dorsal view, and with an oval, imbricated tumulus above each antennal base (fig. 8) *haitiana* Park, n. sp.
 Male head with eyes conspicuous, and vertex greatly modified; excavated between eyes anterior to median tumulus (fig. 10) *hirsuta* Park, n. sp.

***Hispanisella haitiana* Park, new species**

Description. — *Type male:* Head $0.26 \text{ long} \times 0.27 \text{ wide}$; pronotum 0.24×0.24 ; elytra 0.38×0.38 ; abdomen 0.33×0.38 ; total length 1.2.

Cuticula shining reddish brown; subimpunctate except for special areas noted later; pubescence short, inconspicuous, appressed.

Head (fig. 8) with eyes inconspicuous from above but in reality well formed, far down on side of head (almost twice their height from vertex), with about 30 small facets; vertex with a pair of minute foveae, diameter less than that of an ocular facet, and not united by an interfoveal sulcus; an obliquely placed oval, imbricated tumulus above each antennal articulation; frontal margin between tumuli gently arcuate and medianly bearing a mat of short, stiff setae; front slightly transversely excavated and then joining a large clypeal rostrum; posterior margin of rostrum bearing a short median cusp; ventral surface of head with a few aciculate setae; maxillary palpi 4-segmented, 1 minute, 2 elongate-pedunculate, 3 short and rounded-triangular, 4 longer than 2 and elongate-conical with an oblique base.

Antennae 11-segmented, distantly articulated, segments 1 and 2 rather large and elongate subequal; 3 to 7 small and moniliform; 8 about the same as seventh but narrowed apically; 9 wider than eighth and transverse-trapezoidal; 10 of same shape as ninth but wider; 11 largest, one-fourth longer than wide, conical and as long as 6 to 10 united.

Pronotum (fig. 8) with anterior two-thirds orbicular and basal third constricted; a small fovea each side visible from above, and a large median impression united by sulcoid depressions; disc simply convex.

Elytra with rounded oblique humeri; elytron bifoveate with a depression extending posteriorly from each fovea (as in *Malleocephs*); entire sutural stria from mesial foveal depression; flank with a weak subhumeral fovea.

Abdomen with five visible tergites in median length ratio of $1.2/1.0/1.0/0.6/0.8$ with first three bearing strong lateral margins; first tergite with minute basal abdominal carinae separated by almost 30 per cent of segmental width; last tergite rounded-triangular. Seven visible sternites in median length ratio of $0.6/1.2/0.6/0.4/0.2/0.8/0.2$ with sixth medianly flattened. The seventh sternite is so small, and articulated so evenly with the sixth, that it may be overlooked. It is a small semicircular aedeagal plate externally, fitting into a semicircular notch in the sixth (actually this sternite is larger and partially membranous, and most of it lies beneath the sixth sternite). This plate is quite obvious when the aedeagus is exerted (fig. 9), when it is seen to swing to the morphological right. The aedeagus (fig. 9) is $0.22 \text{ long} \times 0.08 \text{ wide}$ and is quite similar in general anatomy to that of *Malleocephs* (fig. 5).

Legs slender, unmodified, tarsi with a single claw. Metasternum gently sulcoid medianly. Metacoxae slightly separated.

Female essentially as for male with the following exceptions: (1) head just discernibly wider than pronotum, as a consequence of her small eyes of only about 14 facets; vertexal tumuli absent; vertexal foveae larger than in the male; face gently declivous, the front and clypeus continuous and simple; (2) only six visible sternites.

Described from nine males and six females (type male and 12 paratypes in the collections of the Illinois Natural History Survey;

two paratypes in author's collection). Collected May 28, 1950 at Shada Headquarters near Refuge, Haiti, by H. B. Mills.

This species appears to be allied to *Malleiceps darlingtoni* Park (1954) on the basis of the comparative anatomy of the aedeagus.

Hispanisella hirsuta Park, new species

Description. — *Type male:* Head 0.22 long \times 0.26 wide; pronotum 0.21 \times 0.25; elytra 0.36 \times 0.45; abdomen 0.34 \times 0.40; total length 1.1.

Cuticula shining reddish brown, sparingly micropunctulate; pubescence very short, appressed and inconspicuous except for special areas noted later.

Head (fig. 10) not including eyes, rounded-triangular; eyes conspicuous, subcircular, at their own height from vertex. Vertex greatly modified: medianly, behind the eyes, it is elevated into a prominent tumulus. This tumulus is declivous posteriorly to the arcuate occiput; it is declivous anteriorly and here bears a patch of stiff setae, and this declivity terminates in an acute tooth. Medianly, between the eyes, the vertex is deeply transversely excavated beneath the acute tooth, with a vertexal fovea either side of excavation. Anterior to this excavation the vertex is less excavated and bears medianly a tubercle which is surmounted by about five contorted setose processes, unusually like the organ on the male vertex of *Melleiceps pearcei* (fig. 6). Anterior to this organ the frontal margin narrows and bears between the antennae an abrupt, high, setose roll. Posterio-lateral portions of the head concave, produced, and bearing oblique rows of very short, stiff, truncate setae. Ventral margin of head nearly glabrous, with a few aciculate setae.

Antennae 11-segmented, distantly articulated; segments 1 and 2 elongate; 3 to 10 much smaller and subequally wide, 3 elongate-obconical, 9 slightly wider than eighth and trapezoidal, 10 larger than ninth, trapezoidal; 11 largest segment, conical, two-fifths longer than wide and as long as 6 to 10 united.

Pronotum with anterior three-fourths transversely orbicular; a lateral fovea each side, wholly visible from above, at constriction of basal fourth, and these three foveae united by an antebasal sulcus; disc simply convex.

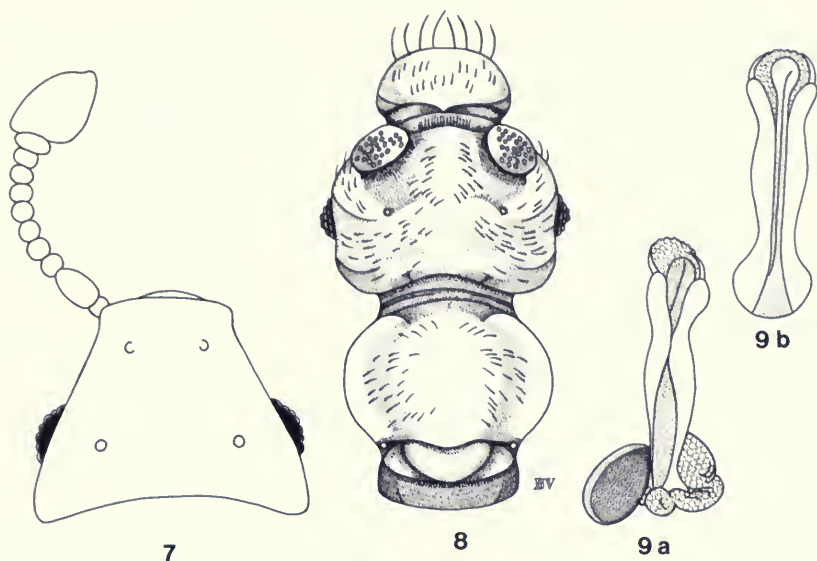
Elytra with rounded humeri; elytron deeply bifoveate with entire sutural stria; flank with a just discernible subhumeral foveoid impression.

Abdomen with five visible tergites in median length ratio of 1.4/1.0/0.8/0.8/0.8 and first three with strong lateral margins. Seven visible sternites in median length ratio of 0.4/1.4/0.6/0.4/0.2/0.2/0.8, last sternite a transversely oval aedeagal plate with acute lateral angles.

Mesocoxae in confluent cavities; metacoxae slightly separated; metatrochanters with ventral faces laminoid. Legs slender, with tarsi bearing a single claw.

Described from a unique male, the type (deposited in the collection of the Illinois Natural History Survey) and collected at Tombeau Cheval, Haiti on May 24, 1950 by H. B. Mills.

This species also shows close affinity with *Malleiceps*; it appears to be most closely allied to *H. haitiana*.



FIGS. 7-9. 7. *Ramelbida quadrifoveata* (Raffray), dorsal view of head of female type (modified from Raffray, 1903). 8. *Hispanisella haitiana* n. g. and sp., dorsal view of head and pronotum of male. 9. *Hispanisella haitiana* n. g. and sp., a, aedeagus exerted, as seen on a point-mount, with aedeagal plate swung to morphological right. b, aedeagus as seen through a slide-mount which had been in cold 15 per cent KOH for two days.

Genus *Dalmomelba* Park

Dalmomelba Park, 1954, Amer. Mus. Nov., 1674, p. 6.

Type-species: *Dalmomelba cazieri* Park, loc. cit., p. 6.

Dalmomelba cazieri Park, 1954. South Bimini (Bahamas).

Genus *Trimiosella* Raffray

Trimiosella Raffray, 1898, Rev. d'Entomol., 17, p. 236.

Type-species: *Trimiosella anguina* (Reitter), 1883, Deut. Entomol. Z., 27, p. 42.

Trimiosella anguina (Reitter) loc. cit., St. Thomas (Virgin Islands).

Haasiella Park, new genus

Trimiiina having the following combination of structural features: (1) Head narrower than pronotum; a pair of vertexal foveae between eyes; eyes well developed; ventral surface of head with aciculate setae; (2) antennae 11-segmented, moderately closely articulated on either side of the frontal margin; segment 10 bilaterally symmetrical; (3) maxillary palpi 4-segmented; segment 1 minute; 2

elongate pedunculate; 3 slightly longer than wide and ovoidal; 4 largest, conical with truncate base; (4) pronotum with disc simply convex and base not bisected by a median vertical carina; (5) elytral humeri rounded; elytron bifoveate; flank with a subhumeral fovea; (6) abdomen with five visible tergites and seven visible sternites in male (only sex known); (7) mesocoxae in confluent cavities; metacoxae distantly articulated; (8) tarsi with a single claw.

Type-species: *Haasiella medicina* Park, new species.

This new genus is named in honor of Dr. Glenn E. Haas, of the U.S. Public Health Service.

Haasiella medicina Park, new species

Description. — *Type male:* Head 0.17 long \times 0.17 wide; pronotum 0.71 \times 0.21; elytra 0.31 \times 0.34; abdomen 0.31 \times 0.31; total length 0.9.

Cuticula shining reddish brown; micropunctulate; pubescence scant on head, rather abundant on pronotum, elytra, and abdomen but very short.

Head (fig. 11) rounded-triangular in dorsal view, with flattened eyes of about 30 facets, the eyes ovoidal, longer than wide; tempora shorter than eyes; a pair of vertexal foveae between eyes, each fovea set in a large depression and these depressions narrowing rapidly to form a complete interfoveal sulcus; frontal margin between antennae a rounded-triangular lobe which is then declivous to clypeolabral suture; posterior margin of this frontal roll triangularly impressed medianly, and bounded posteriorly by interfoveal sulcus; occiput medianly indented and this indentation extended anteriorly to an acute point between vertexal foveae; under surface of head bearing a few aciculate setae.

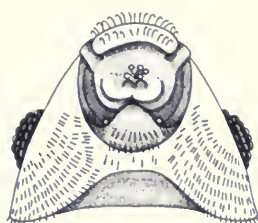
Antennae 11-segmented; moderately approximate on either side of the triangular frontal roll; segment 1 a truncated triangle, with base slightly wider than apex, base slightly wider than segment is long; 2 longer than first and ovoidal; 3 to 8 much smaller, moniliform; 9 very slightly wider than eighth, transverse-moniliform; 10 obviously wider than ninth, trapezoidal; 11 forming the club, largest segment, three-fifths as wide as long, ovoidal and about as long as segments 3 to 10 united.

Pronotum with anterior two-thirds transversely orbicular with the narrower posterior third sharply set off by the antebasal sulcus (reminiscent of the pronotal outline of the North American *Dalmosella* Casey (1897, p. 570) and *Lemelba* Park); disc simply convex; a large, deep median antebasal impression which is joined briefly by a right and left lateral antebasal sulcus; these sulci extending down the flanks of the pronotum.

Elytra with rounded humeri; elytron deeply bifoveate; entire sutural stria and a short discal depression; flank with a subhumeral fovea and longitudinal carina.

Opposite:

FIGS. 10-16. 10. *Hispanisella hirsuta* n. g. and sp., a, dorsal view of head of male. b, top detail of vertexal tubercle. 11. *Haasiella medicina* n. g. and sp., dorsal view of head. 12. *Sandersonella transversa* n. g. and sp., dorsal view of head of male. 13. *Lemelba davisi* Park, dorsal view of male (after Park, 1953). 14. *Lemelba hirsuta* n. sp., dorsal view. 15. *Actium opacum* Park, dorsal view of male (after Park, 1960). 16. *Actium haasi* n. sp., dorsal view of male.



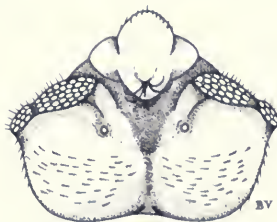
10a



10b



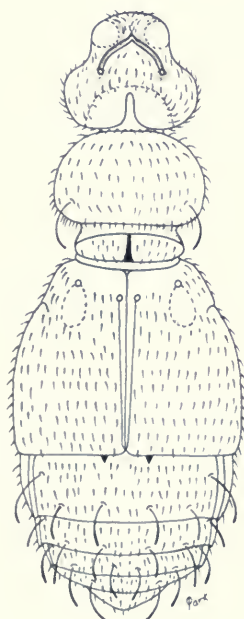
11



12



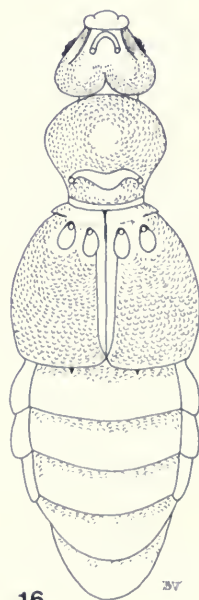
15



13



14



16

Abdomen with five visible tergites in median length ratio of 1.0/0.8/0.8/1.0/0.4 with first three having narrow lateral margins and the last rounded-triangular. Apparently seven visible sternites in median length ratio of 0.4/0.6/0.4/0.4/0.2/1.0/0.2 with third sternite bearing each side a glabrous, egg-shaped tumulus; sixth having a subcircular impression at center of posterior margin; seventh minute and hardly discernible.

Mesocoxae in confluent cavities; metasternum deeply and broadly concave; legs with metacoxae widely separated by a transverse distance equal to the median length of the third tergite; femora medianly swollen; mesotibiae wider medianly and at this point bearing a small spine on the mesial face; tarsi with a single short claw.

Described from a unique male in author's collection. Collected by Glen E. Haas from berlesate of forest floor debris on Big Tree Trail at 1,750 ft. elevation in the Luquillo Forest, Puerto Rico on December 5, 1959.

This species is most closely allied to species of *Lemelba* but lacks the median, vertical, antebasal carina of this genus. It has no known close allies.

There are two ambiguous items. The antebasal pronotal sulci cross the flanks and, obscured by pubescence, may be slightly deeper and wider to form a "lateral pronotal fovea." Second, the seventh sternite in the unique type is obscured by ejecta and may not be present. Only further examination of additional material can settle this question, but it is believed that this sternite is present.

Sandersonella Park, new genus

Triminiina having following combination of structural features: (1) Head (fig. 12) slightly wider than pronotum; vertex with a pair of foveae between the eyes; ventral surface of head with capitate setae; (2) antennae 11-segmented, articulated on either side of a broad, short frontal rostrum with segment 10 bilaterally symmetrical and 11 forming the antennal club; (3) maxillary palpi 4-segmented, segment 1 short, 2 elongate-pedunculate; 3 rounded-triangular and short; 4 largest, subconical; (4) pronotum with a small antebasal fovea each side which is slightly visible from above, and a larger median fovea, all three united by an antebasal sulcus; (5) elytral humeri obliquely rounded, elytron bifoveate at base and a weakly formed subhumeral fovea on flank; (6) male (only sex known) with five visible tergites and seven visible sternites; (7) mesocoxae in confluent cavities and metacoxae slightly separated; (8) tarsi with a single claw.

Type-species: *Sandersonella transversa* Park, new species

This genus has no close neotropical allies and is difficult to place in the tribe Euplectini. The single-segmented antennal club places it in the subtribe Triminiina. The capitate setae allies it with *Latomelba*, *Quadrelba*, and *Allomelba* in so far as the ventral surface of the head is concerned. The rather closely articulated

antennae on the short, broad rostrum gives a head outline which is unique in the fauna under consideration.

This genus is named in honor of Dr. Milton W. Sanderson, of the Illinois Natural History Survey.

Sandersonella transversa Park, new species

Description. — *Type male*: Head 0.15 long \times 0.19 wide; pronotum 0.17 \times 0.17; elytra 0.26 \times 0.27; abdomen 0.21 \times 0.26; total length 0.8.

Cuticula shining yellowish brown, subimpunctate except for special areas noted later; pubescence very short and inconspicuous.

Head (fig. 12) with vertex organized in two areas, e.g., a very transverse basal portion, and a short, broad rostrum; eyes are hardly visible from above, yet they are well-developed, of about 20 small facets, and far down on the sides of the head; tempora very short, about one-half of eye length; the transverse basal part of the vertex has at each antero-lateral angle a small, circular tumulus (reminding one of the larger, oval tumuli of *Hispanisella haitiana* Park); the central part of this basal portion bears a Y-shaped sulcoid impression, and between the stem of the Y and each tumulus is a vertexal fovea. The rostrum is limited laterally by the antennal incisures, and its base is bounded by the arms of the Y-shaped impression; this rostrum is surmounted by a small tubercle and then becomes declivous anteriorly. Ventral surface of the head short and bears about 12 capitate setae. Maxillary palpi described in the generic diagnosis.

Antennae 11-segmented, articulated on either side of the rostrum and so relatively approximate, being separated by the width of the last antennal segment; segment 1 elongate; 2 as wide but orbicular; 3 to 8 much smaller, moniliform; 9 slightly wider; 10 distinctly wider than ninth, trapezoidal; 11 largest segment, similar to *Melba*, as long as segments 4 to 10 united.

Pronotum with anterior two-thirds suborbicular, posterior third suddenly narrower; a minute lateral fovea each side of constriction, just visible from above and its position obscured by pubescence; a relatively large median fovea which is connected with lateral foveae by a narrow antebasal sulcus; disc convex and unmodified.

Elytra with rounded humeri, but with the subhumeral area slightly set off and approaching the condition found in *Actium* Casey; elytron deeply bifoveate; entire sutural stria; discal impression nearly to middle of elytral length; flank with a very weakly developed subhumeral foveoid impression.

Abdomen with five visible tergites in a median length ratio of 1.0/0.8/0.6/0.6/0.6/ with three bearing lateral margins, first with minute basal abdominal carinae separated by about 25 per cent of segmental width; fifth tergite vertical. Seven visible sternites in a median length ratio of 0.2/0.8/0.2/0.2/0.2/0.009/0.6, the seventh in the form of a transversely ovate aedeagal plate.

Mesocoxae in confluent cavities; metasternum convex; metacoxae slightly separated by half of the length of their mesial faces. Legs short, slender; tarsi with a single, short claw.

Described from one male (the type in the collection of the

Illinois Natural History Survey), collected on May 24, 1950 at Tombeau Cheval, Haiti by H. B. Mills.

Genus *Ramelbida* Park

Ramelbida Park, 1942, Northwestern Univ. Stud. Biol. Sci. Med., 1, p. 112.

Type-species: *Ramelbida quadrifoveata* (Raffray), 1903, Ann. Soc. Entomol. France, 72, p. 537.

Ramelbida quadrifoveata (Raffray), St. Thomas (Virgin Islands)

Genus *Hanfordia* Park

Hanfordia Park, 1960, Trans. Amer. Microscop. Soc., 79 (1), p. 10.

Type-species: *Hanfordia absoluta* Park, loc. cit., p. 10.

Hanfordia absoluta Park, beneath bark of dead branches on Cooper's Hill, Red Hills, St. Andrew Parish, Surrey County, Jamaica.

Genus *Lemelba* Park

Lemelba Park, 1953, Nat. Hist. Misc., 121, p. 1.

Type-species: *Lemelba davisi* Park, loc. cit., p. 2.

This genus was described from a single species within the neotropical tip of peninsular Florida, and in the key which follows the type-species is included although it has not been recorded from the West Indies.

KEY TO SPECIES OF *Lemelba*

- | | |
|-------|--|
| 1 | Special setae of the abdomen relatively thin-shafted, very arcuate, and often coiled at tip; a small cusp at center of pronotum which almost touches the median bisecting antebasal carina (fig. 14).
<div style="text-align: right;"><i>hirsuta</i> Park, n. sp.</div> |
| | Special abdominal setae slightly arcuate, thick-shafted, not apically coiled; pronotum without cusp.2 |
| 2 (1) | Eyes almost invisible from a direct dorsal view; metacoxae not contiguous but separated by a transverse distance that equals about one-fourth the metasternal length; type species known from the Florida Everglades (fig. 13) <i>davisi</i> Park |
| | Eyes visible from above; metacoxae separated by a transverse distance that equals about one-half the metasternal length <i>millsi</i> Park, n. sp. |

Lemelba millsi Park, new species

Description. — *Type male:* Head 0.12 long \times 0.17 wide; pronotum 0.17 \times 0.21; elytra 0.29 \times 0.34; abdomen 0.19 \times 0.29; total length 0.8.

Cuticula shining yellowish brown; subimpunctate; general body pubescence short but abundant; abdomen with thick-shafted, slightly arcuate special guard setae, which probably are special tactile receptors. Of these latter there appear to be one or two on the lateral margin of first tergite, about six in a transverse row of the second, third, and fourth tergites, and none on the fifth tergite.

Head rounded-triangular, with a pair of eyes that are slightly visible from above, subcircular in lateral view, of about 30 very small ocular facets; a pair of vertexal foveae between the eyes united by a weakly formed interfoveal sulcus; occiput medianly with a broadly indented area; ventral surface of head with about 10 capitate setae.

Antennae 11-segmented, distantly articulated, segment 1 rounded-triangular, slightly wider at base than long; 2 elongate, slightly larger than first; 3 to 8 much smaller, third subobconical, fourth to eighth submoniliform; 9 slightly larger than eighth, trapezoidal; 10 distinctly larger than ninth, trapezoidal; 11 largest segment, truncate-conical, as long as segments 5 to 10 united, apical truncature bearing a circlet of long setae.

Pronotum with anterior three-fourths transversely orbicular, the basal fourth suddenly narrower and bearing a straight transverse antebasal sulcus which ends each side in a foveoid impression but these latter not obvious from above, probably as a consequence of the pubescence; basal fourth medianly bisected by a strong carina from basal bead to the anterior margin of the sulcus; disc simple.

Elytra with rounded humeri; elytron bifoveate with entire sutural stria from sutural fovea, and discal fovea in an impression; flank with weakly formed subhumeral fovea.

Abdomen with five visible tergites bearing the remarkable special setae as noted previously, and first three tergites with strong lateral margins.

Seven sternites in median length ratio of 0.7/0.34/0.09/0.08/0.009/0.17/0.26 with seventh a transversely ovoidal aedeagal plate. Metasternum broadly and deeply concave. Metacoxae separated by about one-half of the metasternal length. Profemora and mesofemora inflated, especially the latter. Three-segmented tarsi bearing a single, relatively thick tarsal claw.

Described from a unique male, the type, deposited in the Illinois Natural History Survey and collected by Dr. Harlow B. Mills, in whose honor this species is named. Collected June 4, 1950, near Cienfuegos, Soledad, Cuba.

This new species is most closely allied to the type-species, *Lemelba davisii* Park (1953, pp. 1, 2), known only from the Florida Everglades where it is relatively abundant in floor debris.

***Lemelba hirsuta* Park, new species**

Description. — *Type female*: Head 0.19 long \times 0.21 wide; pronotum 0.21 \times 0.21; elytra 0.31 \times 0.38; abdomen 0.28 \times 0.33; total length 1.

Cuticula shining reddish brown; subimpunctate; pubescence sparse but long, giving a shaggy appearance to the insect. In addition there are very long, recurved,

hyaline special setae on pronotum, elytra, and abdomen. Some of these setae on the abdomen are 0.07 mm. long, not including the often recoiled tips, and if the latter are included some about 0.1 mm. long, or half as long as the head (fig. 14).

Head rounded-triangular with the eyes readily seen from above, the eyes with about 34 ocular facets and in lateral view about twice as long as the tempora; a pair of deep impressions in each of which is a small vertexal fovea, these foveae united by an interfoveal sulcus; occiput medianly indented, this narrowing to a subacute point on the vertex between the vertexal foveae; face simply declivous, convex; ventral view of head reveals 16 capitate setae.

Antennae as described for *millsi*.

Pronotum with shape as noted for *millsi* but a lateral fovea is partially visible from above at each end of the transverse antebasal sulcus; additionally, a short, acute cusp briefly overhangs the sulcus just above, but does not touch the median bisecting carina (fig. 14).

Elytra as described for *millsi* except for the shaggy pubescence noted previously, and relatively much broader.

Abdomen with five visible tergites, with strong lateral margins and proportions as shown in Figure 14. Six visible sternites in a median length ratio of 0.03/0.9/0.3/0.2/0.1/0.8 with the last rounded-triangular.

Metacoxae well separated by a transverse distance which is almost one-half the metasternal length. Three-segmented tarsi, with an arcuate tarsal claw.

Described from a single female, the type specimen, in the Museum of Comparative Zoology. Collected by Dr. P. J. Darlington in July, 1938 at Sanchez, Dominican Republic. This new species is unique in the genus so far by the character of its recoiled tergal pubescence. It is not closely allied to either *davisi* or *millsi*.

The genus *Lemleba* is of interest zoogeographically in that the Floridian and Cuban species are obviously closely allied in body shape and special setae, and this is one of the very few known instances where faunal affinity can be shown between neotropical Florida and the West Indies, despite the relatively short distance between these areas.

Genus *Actium* Casey

Actium Casey, 1886, Bull. California Acad. Sci., 2 (6), p. 201.

Type-species: *Actium californicum* (LeConte), 1878, Proc. Amer. Phil. Soc., 17, p. 383. California, U.S.A. (See revision of *Actium* by Grigarick and Schuster, 1971.)

KEY TO SPECIES OF *Actium*

- 1 Cuticula shining and finely punctulate *visendum* Park
- Cuticula subopaque, with head, pronotum, and elytra finely granulated 2

- 2 (1) Eyes large, of many small ocular facets, and obvious from a dorsal view; frontal margin in the form of an elevated frontal roll (fig. 15).

opacum Park¹

Eyes only slightly visible from above, small, and of only seven ocular facets; frontal roll triarcuate (fig. 16)*haasi* Park, n. sp.¹

Actium haasi Park, new species

Description. — *Type male:* Head 0.10 long \times 0.15 wide; pronotum 0.16 \times 0.17; elytra 0.21 \times 0.22; abdomen 0.31 \times 0.23; total length 0.8.

Cuticula yellowish brown, only slightly shining to subopaque as a consequence of microgranulate-punctulate surface of head, pronotum, and elytra; pubescence short and inconspicuous.

Head rounded-triangular; eyes only slightly visible from above, subcircular in lateral view, small, consisting of seven facets; a pair of vertexal foveae united by a narrow sulcus; frontal margin elevated into a triarcuate roll, as a consequence of the elevated antennal acetabulae (fig. 16); occiput slightly indented medianly; ventral surface of head with a few capitate setae.

Antennae 11-segmented, relatively distant, segments 1 and 2 elongate but the first not obvious as it is deeply inserted; 3 to 8 much smaller, subequal in width, third slightly obconical, others submoniliform; 9 slightly larger than eighth; 10 obviously larger than ninth; 11 largest segment, elongate-ovoidal and about as long as 3 to 10 inclusive.

Pronotum with simple, convex disc; a biarcuate antebasal sulcus connecting a lateral fovea each side fully visible from above.

Elytra with subhumeral indentation on each side; elytron bifoveate, with the anterior rim of each fovea elevated, entire sutural stria, flank with a subhumeral fovea beneath the subhumeral indentation each side.

Abdomen with five visible tergites in relative proportions as illustrated (fig. 16); first three tergites with distinct lateral margins; a pair of very short basal abdominal carinae which are separated by slightly less than one-third of total segmental width.

Seven sternites in median length ratio of 0.03/0.07/0.07/0.06/0.03/0.06/0.03 with the seventh in the form of a transverse aedeagal oval palte which is asymmetrically articulated to the right side. Third sternite bearing on each side a tumulus.

Legs slender; three-segmented tarsi, the third segment bearing a single claw.

Described from a unique male, the type, in the author's collection. This new species was collected by Dr. Glenn E. Haas, in whose honor this species is named. It was collected from forest floor debris near Stone Watch Tower at an elevation of 2,850 ft., in the Maricao State Forest, Puerto Rico on January 24, 1960.

It is most closely related to *opacum* Park, from Jamaica, by the

¹Figures 15 and 16 show the integumental granulation as a series of semicircles. The general effect seems too coarse and has not pleased either the author of this paper or his artist.

character of its integumental ornamentation, but is quickly discriminated from this species by its rudimentary eyes and character of the frontal roll.

Genus *Latomelba* Park

Latomelba Park, 1955, Bull. Chicago Acad. Sci., **10** (7), p. 111.

Type-species: *Latomelba quadrisicca* Park, loc. cit., p. 112, Morce's Gap, St. Andrew Parish, Jamaica at 5,500 ft. elevation.

In this genus males have seven sternites whereas females have six sternites; additionally, the males have the third sternite variously modified, and the fourth sternite bears a pair of remarkable spatulate setae on each side.

KEY TO MALES OF THE SPECIES OF *Latomelba*

Lateral third of third sternite each side bearing a tumulus surmounted by a facet-like nipple, and laterad of this tumulus is a dense circlet of erect setae, the tips of which are recurved inwardly to form a structure resembling a miniature bird cage.

quadrisicca Park

Lateral third of third sternite each side bearing a weakly-formed, simple tumulus, and laterad of this tumulus is a weakly-formed depression*sympatrica* Park

Genus *Quadrelba*

Quadrelba Park, 1955, Bull. Chicago Acad. Sci., **10** (7), p. 116, 1942, Northwestern Univ. Stud. Biol. Sci. Med., p. 120.

Type-species: *Quadrelba parmata* (Reitter), 1883, Deut. Entomol. Z., **27**, p. 40 (*Trimniopsis*). St. Thomas, Virgin Islands, and Puerto Rico.

Males with seven visible sternites, the seventh a subcircular aedeagal plate which is asymmetrically articulated to the sixth sternite; female with six visible sternites, the sixth rounded-triangular.

KEY TO MALES OF THE SPECIES OF *Quadrelba*

1 Vertex between the auriculate preocular angles bearing a simple, free median tubercle*parmata* (Reitter)

Vertex not as described2

2 (1) Vertex deeply, entirely sulcate behind the thin, carinoid preocular angles; front projecting posteriorly into this sulcus medianly as a triangular field; this field bears a pair of approximate foveae, and terminates in a raised setose angle*inconspicua* (Reitter)

Vertex not as described; the large head has slightly reflexed preocular angles which are simply expanded*ventricosa* (Reitter)

Genus *Allomelba* Park

Allomelba Park, 1954, Amer. Mus. Nov., **1674**, p. 16.

Type-species: *Allomelba antennata* Park, loc. cit., p. 17.

Allomelba antennata Park. South Bimini Island, Bahamas.

Genus *Zolium* Casey

Zolium Casey, 1897, Ann. New York Acad. Sci., **9**, p. 560.

Type-species: *Zolium eggersi* (Reitter) 1883, Deut. Entomol. Z., **27**, p. 38 (*Trimiosis*). Described from St. Thomas, Virgin Islands. Collected by and named for Herrn von Eggers.

Zolium eggersi (Reitter), loc. cit., see checklist for complicated taxonomic history.

Genus *Trimiovillus* Park

Trimiovillus Park, 1954, Amer. Mus. Nov., **1674**, p. 11; emended Park, 1960, Trans. Amer. Microscop. Soc., **79** (1), p. 18.

Type-species: *Trimiovillus bahamicus* Park, loc. cit., p. 12, South Bimini Island, Bahamas.

KEY TO SPECIES OF *Trimiovillus*

- Vertexal foveae pubescent.....*bahamicus* Park
Vertexal foveae nude.....*bellingeri* Park

Genus *Melba* Casey

Melba Casey, 1897, Ann. New York Acad. Sci., **9**, p. 565.

Type-species: *Melba thoracica* (Brendel), 1889, Entomol. Amer., **5**, p. 196. (*Trimium*), Iowa, U.S.A.; designated by Bowman, 1934, p. 144.

Males have seven visible sternites, the seventh a subcircular aedeagal plate asymmetrically articulated to the sixth sternite. Females have six visible sternites, the sixth rounded subtriangular.

KEY TO WEST INDIAN SUBGENERA OF *Melba*

- 1 Vertex with four free foveae; an anterior pair near the antennal bases, and a posterior pair between the eyes; no interfoveal sulcus.
Melba (Rameloidea) Park
- Vertex not as described2
- 2 (1) Vertex with three free foveae; a pair between the eyes, and a median fovea on a line between posterior ocular margins; no interfoveal sulcus.
Melba (Cismelba) Park
- Vertex with one pair of foveae between the eyes; a more or less entire interfoveal sulcus present.....3

- 3 (2) Interantennal margin of the front gently arcuate to subtruncate between antennal bases.....4
 Frontal margin extended more or less above the face (more pronounced in males, but distinct in females).....*Melba (Frontelba)* Park
- 4 (3) Elytral flank with an oblique line which starts near middle of lateral margin and extends obliquely dorso-posteriorly to apical margin
Melba (Melba) Casey
- Elytral flank with a longitudinal line which is parallel to lateral margin from near humeral area to apical margin.....*Melba (Perimelba)* Park

Melba Subgenus Rameloidea Park

Rameloidea Park, 1942, Northwestern Univ. Stud. Biol. Sci. Med., 1, pp. 117-118, 121.

Type-species: *Melba temporalis* Raffray, 1909, Ann. Soc. Entomol. France, 78, p. 16.

M. (Rameloidea) temporalis Raffray. Martinique (Windward Islands), type locality; Antigua (Leeward Islands)

Melba Subgenus Frontelba Park

Frontelba Park, 1942, Northwestern Univ. Stud. Biol. Sci. Med., 1, pp. 117-118, 120; 1952, Chicago Acad. Sci., 9 (2), pp. 135, 140.

Type-species: *Melba frontalis* Raffray, 1908, Ann. Soc. Entomol. France, 77, p. 35, Guadeloupe, Leeward Islands.

KEY TO SPECIES OF *Melba (Frontelba)*

- Front slightly produced above clypeus in a semicircular margin, this margin medianly roughened (dissecting binocular at 70 ×, and microscope whole-mounts at 430 × show this roughening to be caused by 10 to 12 subvertical microstruts of the cuticula)*clypeata* (Reitter)
- Front produced between antennal bases, this extension bearing three tubercles in a triangular pattern*frontalis* Raffray

Melba Subgenus Melba Casey (sensu Casey, 1897)

KEY TO MALES OF SPECIES OF *Melba (Melba)*

- 1 At least second and third sternites relatively simple, not bearing tubercles, or foveae, or conspicuous depressions.....2
 These sternites all or in part modified by tubercles, foveae, or depressions. 4
- 2 (1) Second to fifth sternites subequally long*crassipes* Raffray
 Seconds to fifth sternites progressively shorter3
- 3 (2) Aedeagal plate (seventh sternite) irregularly and transversely rhomboidal; vertexal foveae oblong*grenadensis* Raffray

- Aedeagal plate subcircular; vertexal foveae circular; mesotrochanters each bearing a conspicuous spine*zonula* Park
- 4 (1) Third sternites bearing a tubercle on each side.....*specularis* (Reitter)
- Third sternite impressed on each side, this impression medianly subtuberculate.....*gibbula* (Reitter)

Melba Subgenus *Perimelba* Park

Perimelba Park, 1943, Bull. Chicago Acad. Sci., **7** (3), p. 183.

Type-species: *Melba granulosa* Park, 1943, Bull. Chicago Acad. Sci., **7** (3), p. 184, Victoria, Tamaulipas, Mexico.

KEY TO SPECIES OF *Melba* (*Perimelba*)

- Females with basal abdominal carinae of first tergite prominent, nearly half as long as segment and separated by about one-third of segmental width (male unknown).
.....*jamaicensis* Park
- Females with these carinae very short, one-sixth of segmental length and with about the same separation (male sex with remarkable cephalic structures) (q.v. literature)*hoffi* Park

Melba Subgenus *Cismelba* Park

Cismelba Park, 1960, Trans. Amer. Microscop. Soc., **79** (1), p. 16.

Type-species: *Melba trifoveata* Park, loc. cit., p. 16.

M. (Cismelba) trifoveata Park. Hanover Parish, Cornwell County, Jamaica.

There remains in the West Indian fauna a species unknown to the author which cannot be placed in a subgenus. This is *Melba fleutiauxi* (Raffray), 1890b, Bull. Soc. Entomol. France, (6) **10**, pp. 204-205, collected on Guadeloupe, (Leeward Islands).

Tribe BRACHYGLUTINI

Brachyglutini Raffray, 1908, Genera Insectorum, 64th Fascicle, p. 190.

KEY TO SUBTRIBES OF BRACHYGLUTINI

- 1 Ventral surface of head with a median ovate fossa.
.....DECARTHRONINA
- Ventral surface of head otherwise2
- 2 (1) Ventral surface of head with a median, longitudinal carina or carinoid ridge, this feature is usually strong but may be weak, and may be entire or interrupted; body usually obviously pubescent3
- Ventral surface of head medianly simple, lacking any trace of a median carina or carinoid ridge; body usually glabrousEUPSENIINA

- 3 (2) Each elytron bearing a long, distinct discal stria; this stria varies in length between species and genera from nearly as long as elytron to about half as longBRACHYGLUTINA

Elytra usually without any trace of a discal stria or impression; rarely each elytron may bear a vague, short intrahumeral impression or stria which may be from a fifth to a third of the elytral length.

PSELAPTINA

Subtribe PSELAPTINA Park, new subtribe

Type-species: *Pselaptus belfragei* LeConte, 1880, Trans. Amer. Entomol. Soc., 8, pp. 184-185, Texas, U.S.A.

In this subtribe are placed those genera having the following combination of structural characters: (1) ventral surface of head bearing a median, longitudinal carina which may be a sharp ridge or keel but may be a low carinoid line; (2) antennae in the *West Indian species* 11-segmented; (3) antebasal pronotal and elytral foveae vary as between genera: they may be distinct and conspicuous, or very poorly developed in which case they are represented by just discernible pits, or they may be absent; (4) elytra usually lacking any discal stria or impression; on rare occasions each elytron may bear a vague, short intrahumeral impression or stria which may be from a fifth to a third of the elytral length; (5) metacoxae obviously separated by the length of a metatrochanter or more; (6) abdomen with a narrow but distinct margin on each side of the first tergite, and often on the first three tergites.

This subtribe has caused considerable trouble for many years. The taxonomy is difficult. This is not because the species populations are poorly defined, but rather the early generic concepts were couched in such vague or brief generalizations that type species could not be recognized in many cases until the type specimens had been examined. Consequently much confusion arose. New species were described in unsuitable genera; often specimens in collections were masquerading under established specific names but were undescribed species. Inevitably this led to a complicated synonymy. Most of the type specimens of species in Pselaptina that were described by Schaufuss, Reitter, Raffray, and Sharp have been examined by the author in the spring of 1951. I am grateful to the late Dr. René Jeannel and M. Guy Colas of the Museum National d'Histoire Naturelle in Paris, and Dr. E. B. Britton and Mr. W. E. China of the British Museum of Natural History for placing at my

disposal the facilities of their respective museums. Quite a bit of the taxonomic material which follows in this subtribe reflects this first-hand examination of European collections.

KEY TO GENERA OF PSELAPTINA

- 1 Maxillary palpal segment 3 (penultimate) of exceptional size, nearly as long as segment 4, elongate-ovoidal, very flattened and with the lateral face bearing a dense mat of short pubescence (fig. 17).
Bythinogaster Schaufuss
- Maxillary palpal segment 3 otherwise.....2
- 2 (1) Maxillary palpal segment 4 (ultimate) with a tooth or tubercle or angle on the lateral face, this process may be rounded or acute, and may occur near base or apex of segment (fig. 18)*Berdura* Reitter
- Maxillary palpi otherwise.....3
- 3 (2) Mesosternal process ending posteriorly in a wide, truncate to broadly rounded margin between mesocoxae; this process is usually distinctly transverse, but may be only slightly wider than long and lacks a median mesosternal carina of any kind.....*Scalenarthus* LeConte
- Mesosternal process usually distinctly longer than wide, often ending in a fine, acute point and may or may not bear a median carina or keel.
Pselaptus LeConte

Genus *Berdura* Reitter

Berdura Reitter, 1881, Verh. Natur. Ver. Brunn, **20**, p. 187.

Type-species: *Berdura excisula* Reitter, 1883, Deut. Entomol. Z., **27**, p. 35, St. Thomas, Virgin Islands.

KEY TO SPECIES OF *Berdura*

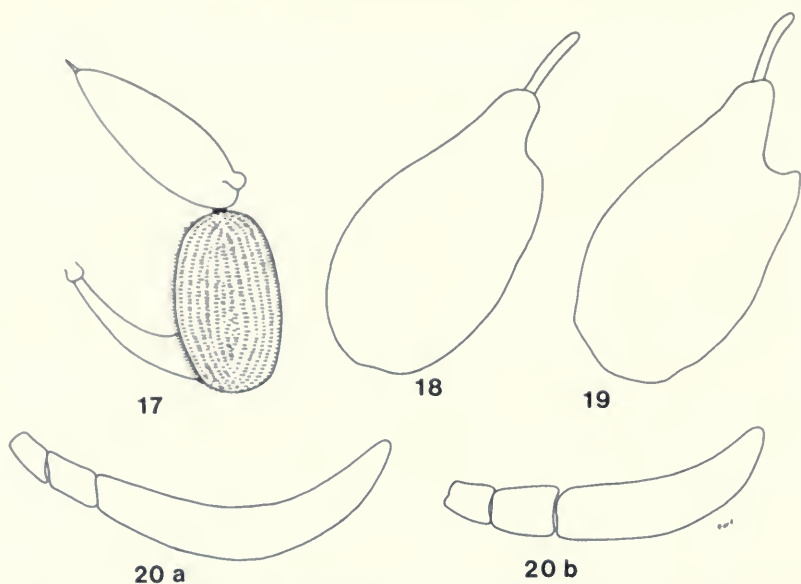
- Distal segment of maxillary palpus with the latero-distal area of external face rounded (fig. 18).....*leavitti* Park, n. sp.
- This area of maxillary palpus acute (fig. 19).....*excisula* Reitter

Berdura leavitti Park, new species

Description. — *Type female*: Head 0.12 long \times 0.12 wide; pronotum 0.275 \times 0.31; elytra 0.45 \times 0.84; abdomen 0.45 \times 0.45; total length 1.3.

Cuticula shining yellowish brown; lightly micropunctulate; pubescence short, appressed, longer on abdomen.

Head rounded-quadrate with eyes visible from above, subcircular in lateral outline, of about 24 facets; vertex convex and simple, with a pair of small vertexal foveae on a line with anterior eye margins, and united by a weak interfoveal sulcus; frontal margin slightly convex and face simple and unmodified; ventral surface of head with a median longitudinal carina, and on each side an anteriorly converging carina; on slide mount at 430 \times each mandible is seen to bear a small boss or tubercle. Maxillary palpi as illustrated (fig. 18).



FIGS. 17-20. 17. *Bythinogaster simplex* Schaufuss, maxillary palpus, type-species from Haiti (after Park, 1960). 18. *Berdura leavitti* n. sp., distal segment of maxillary palpus. 19. *Berdura excisula* Reitter, distal segment of maxillary palpus. 20. *Pselaptus longiclava* (Schaufuss), a, antennal segments 9-10-11 of male. b, antennal segments 9-10-11 of female.

Antennae 11-segmented, distantly articulated; segments 1 and 2 large, elongate-subcylindrical; 3-7 much smaller, subequally wide, third slightly obconical, others subquadrate; 9 wider than eighth and barrel-shaped or elongate-cylindrical with slightly convex lateral margins; 10 slightly longer, and slightly bell-shaped; 11 largest segment, about as long as segments 7 to 10 united.

Pronotum with rounded sides; a small round antebasal fovea on each flank; a median antebasal fovea not apparent at 70 \times , and the two lateral foveae appear to be united by an evanescent crease, but so slightly that these foveae may be said to be "free" for practical purposes; disc simply convex.

Elytra with rounded humeri and also appear to lack antebasal foveae at both 70 \times and 430 \times , although at 70 \times there appear to be several short arcuate ridges near the anterior elytral margins; such features disappear at 430 \times ; sutural stria entire; no discal impression.

Metathoracic wings present.

Abdomen with five visible tergites in median length ratio of 0.14/0.08/0.08/0.07/0.15 with last two tergites subvertical; very narrow margins on first three tergites; basal abdominal carinae very short and separated by slightly more than one-fourth of the total segmental width. Five visible sternites. Legs slender and unmodified. Tarsi 3-segmented, 1 minute, 2 and 3 very long and elongate cylindrical, the third more slender and bearing a single claw.

Described from two females. The type, deposited in the Museum of Comparative Zoology, collected by Dr. P. J. Darlington on November 28, 1926 at Cienfuegos, Soledad, Cuba. The paratype, in author's collection, was collected by B. B. Leavitt, in whose honor this species is named, in Soledad, Cuba on July 1, 1932.

The nearest ally is *Berdura excisula* Reitter, the type-species from St. Thomas, Virgin Islands.

Genus *Scalenarthrus* LeConte

Scalenarthrus LeConte, 1880, Trans. Amer. Entomol. Soc., 8, p. 135.

Type-species: *Scalenarthrus horni* LeConte, loc. cit., Arizona, U.S.A.

KEY TO MALES OF THE SPECIES OF *Scalenarthrus*

- 1 Distal antennal segment (11) elongate-arcuate, as long as the remaining 10 segments united, with an oblique fossa in basal half *claratus* Raffray
Distal antennal segment otherwise 2
- 2 (1) Antennal segment 11 almost as wide as long, and almost divided by a deep incision which is two-thirds the width of segment, located in basal half, with apical edge straight and proximal edge oblique, the internal faces lightly pubescent *jamaicensis* Park
Antennae otherwise 3
- 3 (2) Antennal segment 2 elongate but with the dorsal face tumid, segment 10 transversely asymmetrically triangular, the narrow internal face truncate; segment 11 about as wide as 10, unmodified, elongate acute-oviform *guadelupensis* Raffray
Antennae otherwise 4
- 4 (3) Antennal segment 2 simply elongate-cylindrical; segment 10 transversely trapezoidal, segment 11 wider than 10, with truncate base, unmodified, elongate-oviform *tomentosus* Park
Antennae highly modified; segment 2 much larger than 1 with distal-mesial area tuberculate; segments 7-8-9 much wider than 6, irregularly shaped and with distal-mesial margins fringed with long setae.
pectinicornis Raffray

Genus *Pselaptus* LeConte

Pselaptus LeConte, 1880, Trans. Amer. Entomol. Soc., 8, p. 184.

Type-species: *Pselaptus belfragei*: LeConte, loc. cit., p. 185, Texas, U.S.A.

KEY TO SPECIES OF *Pselaptus*

- 1 Distal antennal segment (11) fusiform, as long as the preceding four segments united *sternalis* Raffray

- Distal antennal segment (11) fusiform, of exceptional length, with an arcuate apex, much longer than the four preceding segments united.....2
- 2 (1) This distal segment (11) very elongate-arcuate and six times the length of the tenth segment (fig. 20a)male *longiclava* (Schaufuss)
- This segment almost four times as long as tenth segment and less arcuate (fig. 20b)female *longiclava* (Schaufuss)

Genus *Bythinogaster* Schaufuss

Bythinogaster Schaufuss, 1887, Tijdschr. Entomol., 30, p. 111.

Type-species: *Bythinogaster simplex* Schaufuss, loc. cit., p. 112, "Hispaniola (probably Haiti as the citation is 'Saint-Domingue')" Park, 1942.

So far as known this genus is endemic to the Greater Antilles. Furthermore, the genus can be discriminated by the unique third segment of the maxillary palpus which is large, almost as long as the fourth (distal) segment, elongate-ovoidal in outline, very flattened latero-mesially, and bearing on its lateral face a dense mat of very short setae (fig. 17).

The aedeagus varies greatly as between the five known species, and yet has that collective aspect of general anatomy which suggests that *Bythinogaster* is a natural generic aggregate. All five species have four spines (which are black-tipped for identification in the illustrations) associated with the membranous internal sac, and in each case these spines have a qualitatively different distribution. All five species have a lateral process or falx on the morphological left side; four have a falx on the morphological right side. Illustrations of the aedeagei are all drawn from the dorsal aspect with the distal (posterior) aedeagal margin toward the top of the page so that the morphological left side appears on the right side of the figure, and should be kept in mind when using the key to species. In all but one species the author dissected out the aedeagus, and so the organ could be mounted and drawn at 430 diameters. The type of *B. simplex* Schaufuss had the aedeagus fully exerted, and was drawn at 70 diameters magnification. The falces in this genus are very thin and it is probable that the right falx of *B. simplex* was present, but so amalgamated with the organ that it could not be discovered. It should be noted that the thin falces tend to have their distal ends twisted or altered after a period of years, probably as a consequence of the differential tensions set up within their own organization or as a reaction to the drying of the Canada balsam; but the four spines noted are remarkably stable.

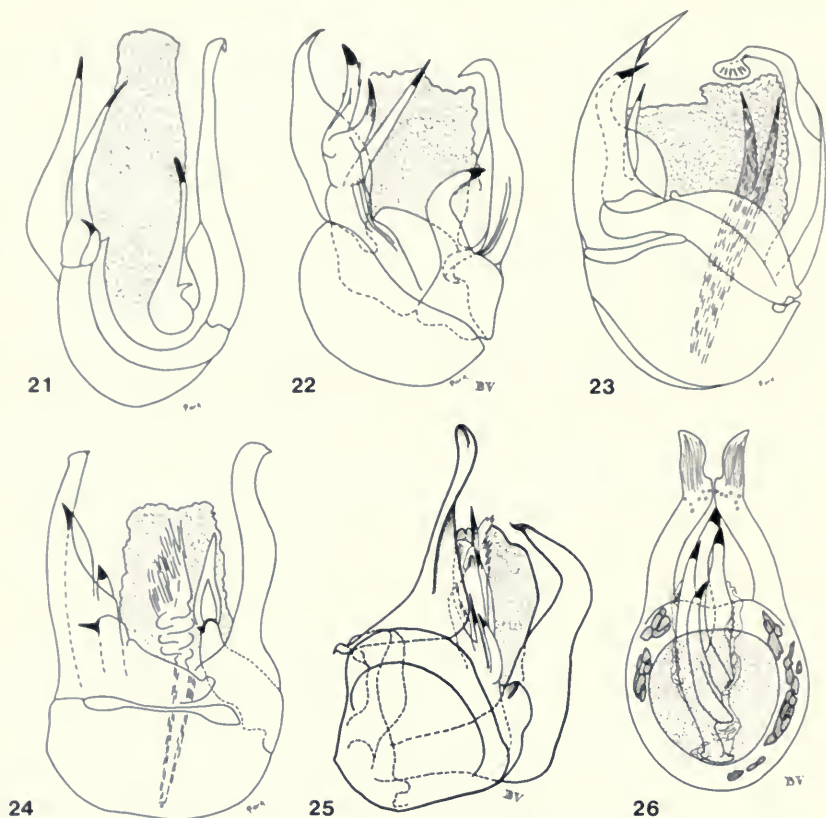
KEY TO SPECIES OF *Bythinogaster* BASED ON AEDEAGI

- | | | |
|-------|--|---------------------------------|
| 1 | Left falx curved or inclined to the morphological right | 2 |
| | Left falx curved or inclined to the morphological left | 4 |
| 2 (1) | Left falx suddenly arcuate, with its tip expanded as a flat, ovoidal disc (fig. 23)..... | <i>nymphoides</i> Park |
| | Left falx with its tip narrowly arcuate and acute..... | 3 |
| 3 (2) | The four black-tipped spines of the internal sac (fig. 25) in an oblique row to the morphological left | <i>parsonsi</i> Park, n. sp. |
| | The four spines not such an arrangement (fig. 22). | |
| | | <i>bisphaeroides</i> Schauffuss |
| 4 (1) | Left falx narrowing distally to an acute and recurved apex (fig. 21). | |
| | | <i>simplex</i> Schauffuss |
| | Left falx distally biarcuate, not narrowing very much at apex which is broadly arcuate (fig. 24) | <i>diabolicus</i> Park |

ALTERNATE KEY TO SPECIES OF *Bythinogaster*

BASED ON THE FRONTO-CLYPEAL AREA OF THE MALE SEX

- | | | |
|-------|--|------------------------------|
| 1 | Frontal margin on a line through dorsal articulations, not medianly tuberculate..... | 2 |
| | This interantennal frontal margin medianly bearing a tubercle which is surmounted by a pair of anteriorly inclined tufts of setae. | |
| | | <i>parsonsi</i> Park, n. sp. |
| 2 (1) | Front subvertically declivous, this declivity microgranulate-alutaceous, then front terminates in a pair of apically directed, mesially setose tubercles; on each side of this overhanging margin the face extends laterally in an angular ovoidal wing which forms a part of the antennal acetabulum; beneath the median frontal margin the face is flattened, setose and extends semicircularly to the semilunate clypeus. | |
| | | <i>nymphoides</i> Park |
| | Face otherwise | 3 |
| 3 (2) | Frontal margin between antennae angulate and vertex just behind this margin microalutaceous; below the margin the face is laterally smooth and declivous, and medianly is extended apically as a longitudinally carinoid lobe; this lobe ends in a pair of small membranous processes; beneath this distal lobe the clypeus bears a median conical tubercle. | |
| | | <i>diabolicus</i> Park |
| | Face otherwise | 4 |
| 4 (3) | Interantennal line of front simple, declivous; face narrows with declivity ending in a rounded-subtriangular point which bears a tuft of setae; beneath this point the front and clypeus are deeply excavated transversely; clypeus transverse and tumid..... | <i>simplex</i> Schaufuss |



FIGS. 21-26. 21. *Bythinogaster simplex* Schaufuss, aedeagus (after Park, 1960). 22. *Bythinogaster bisphaeroides* Schaufuss, aedeagus (modified from Park, 1960). 23. *Bythinogaster nymphoides* Park, aedeagus (after Park, 1960). 24. *Bythinogaster diabolicus* Park, aedeagus (after Park, 1960). 25. *Bythinogaster parsonsi* n. sp., aedeagus. 26. *Reichenbachia eucera* (Aubé), aedeagus, dorsal face. The four spines have been blackened at tips for discrimination; the dehydrated and irregular compressor muscles of the basal bulb have been stippled; the dorsal membrane of basal bulb is shown in light circular stipple.

Interantennal line of front simple and declivous; the distal margin of the clypeus is narrowed into two rounded-triangular points, and between these points bears a pair of anteriorly-directed elongated, obtuse dentoid processes *bisphaeroides* Schaufuss

***Bythinogaster parsonsi* Park, new species**

Description. — *Type male:* Head 0.26 long \times 0.34 wide; pronotum 0.34 \times 0.34; elytra 0.63 \times 0.55; abdomen was damaged so that no accurate measurements could be obtained. Total length, based on other known species of the genus probably would

be between 1.7 and 1.8 long, and with a maximum width probably between 0.5 and 0.6.

Cuticula polished yellowish brown; subimpunctate and subglabrous.

Head with large prominent eyes, subcircular in lateral view, and of 22 large facets; a pair of small vertexal foveae, each closer to its adjacent eye than to each other, and obviously smaller than an ocular facet; no interfoveal sulcus; vertex simply and gently convex; interantennal frontal margin medianly elevated into a tubercle; this tubercle surmounted by a pair of tufts of setae which are slightly inclined anteriorly; face glabrous and declivous and bearing medianly a low tubercle; face narrows anteriorly and the margins limited by a carinoid ridge to about the fronto-clypeal area, where these carinoid ridges become slightly elevated and recurved; clypeus flattened beneath these carinoid ridges, the flattened area also carinoid at the perimeter; anterior clypeal margin three-sided, the median side truncate; ventral surface of head with a short median ridge.

Antennae distantly articulated, 11-segmented; segments 1 to 7 longer than wide, 1 relatively large, 2 shorter and narrower; 3 to 7 obviously smaller than 2; 3 to 5 subequal; 6 as long as 5 but slightly narrower; 7 slightly shorter than 6; 8 shorter than 7, subquadrate; 9 slightly wider than 8, subcircular; 10 obviously larger than 9, subcircular; 11 largest segment, oviform.

Pronotum lacking antebasal foveae *per se*, a faintly darkened vestigial impression each side; disc simply convex.

Elytra lacking antebasal foveae *per se*, but with a pair of vestigial impressions at base; a weak, entire, strioid sutural impression; humeri rounded. Metathoracic wings well-developed.

Abdomen with five visible tergites and five visible sternites, but the abdomen was slightly crushed diagonally so that measurements of segmental proportions were not attempted; first three tergites with very narrow margins. Legs slender and not modified; tarsi long, slender, 3-segmented with the last bearing a single tarsal claw. Metacoxae well separated. Aedeagus as illustrated (fig. 25).

Described from an unique male, the type deposited at the Museum of Comparative Zoology. It was collected at Soledad (Cienfuegos), Cuba during the period May-June, 1939 by C. T. Parsons, in whose honor this species is named. This species does not appear to have any close allies by virtue of the interantennal tubercle; geographically it is most closely allied to *B. bisphaeroides* Schaufuss. Oddly this latter species was not included in Raffray's *Coleopterorum Catalogus* (1911) and I did not know of it and so it went unlisted in my (1942) treatment of neotropical Pselaphidae. What I consider to be *B. bisphaeroides* Schaufuss is represented by a single male, in the Museum of Comparative Zoology, collected at light by L. L. Scaramuzza at Baragua, Cuba, August 2, 1927.

Subtribe BRACHYGLUTINA Raffray (s. str.)

Brachyglutina Raffray, 1908, *Genera Insectorum*, 64th Fascicle, p. 108.

At the present time three genera are listed in this subtribe in the West Indies. These are *Achillia*, *Bryaxis*, and *Reichenbachia*.

Genus *Achillia* (Reitter, 1890)

This genus was named in honor of the distinguished French pselaphidologist, Achille Raffray (Reitter, 1890, p. 212). It is a Chilean genus, and by 1911 Raffray (pp. 87-88) listed 24 species from Chili, and *Achillia excisa* Schaufuss (1879, p. 494) from Cuba! Such a disjunct distribution was noted by Park (1942, p. 154). Fortunately, Jeannel (1962, p. 408) redescribed *A. excisa* Schaufuss from the type in the Paris Museum, and stated that it is very doubtful if the species came from Cuba, and without doubt it was a Chilean species. Therefore, I propose that this genus, *Achillia* be removed from the West Indian faunal list.

Genus *Bryaxis* (Kugelann, 1794)

This genus, largely of the Palaearctic Region, has had one of the most complicated taxonomic histories in the family Pselaphidae, being placed in different tribes, and fragmented and discussed by many people who have described species in the genus. In a faunal paper such as this one any further discussion would be out of place. What is relevant here is that Schaufuss described two species of *Bryaxis* from Cuba:

Bryaxis bisinuata Schaufuss, 1887, p. 130

Bryaxis truncata Schaufuss, 1886, p. 132

Raffray (1911, p. 104) places them in *Reichenbachia*, but notes that he regards this generic assignment as doubtful. Park (1942, pp. 152-153) could not place either species in any group of *Reichenbachia*. I do not know these two species and cannot interpret their characters from the original descriptions.

Therefore, I propose that this genus *Bryaxis* be removed from the West Indian faunal list until authentic specimens of each can be located and redescribed.

Genus *Reichenbachia* Leach

Reichenbachia Leach, 1826, Zool. Jour., 2, p. 451.

Type-species: *Reichenbachia juncorum* (Leach), loc. cit., p. 452, Europe and Algeria.

Reichenbachia is well-known and widely distributed. It is probably the largest genus in Pselaphidae, and is cosmopolitan, with the possible exception of Australia and New Zealand. For a general discussion of the neotropical fauna see Park (1942, pp. 135-153).

KEY TO THE SPECIES OF *Reichenbachia*

This key is based on the male sex unless otherwise noted, and deals primarily with antennal characteristics.

- 1 Antennal segment 10 abnormally large in both sexes, as wide as or much wider than the last (11) segment.....2
 - Antennal segment 10 normal, not obviously wider or larger than segment 11.....5
- 2 (1) Antennal 10 distinctly wider than 11, distinctly obconical with truncate base narrower than truncate apex, and sides divergent3
 - Antennal segment 10 slightly wider than 114
- 3 (2) Antennal segment 11 oblong with truncate base and acute apex; segments 7, 8, 9 very transverse (fig. 28).....male *grenadensis* Raffray
 - Antennal segment 11 ovate, with a much narrower base; segments 7, 8, 9 less transversefemale *grenadensis* Raffray
- 4 (2) Antennal segment 10 square, with mesial face rounded.
 - male *vincentania* Raffray
 - Antennal segment 10 nearly twice as long as 9, and only a little wider.
 - female *vincentania* Raffray
- 5 (1) Antennal segment 6 of male with *ventral* face concave, bearing a tuft of setae on its mesio-posterior angle (fig. 27).....*eucera* (Aubé)
 - Antennal segment 6 of male with mesial face bearing an apically setose tubercle or blunt spine.....6
- 6 (5) Antennal segment 6 with a blunt, elongate tubercle arising from the *concave ventral* face and projecting from the anterior third of segment (fig. 29)*darlingtoni* Park, n. sp.
 - Antennal segment 6 with a very narrow base and an irregularly swollen anterior two thirds; a short, blunt tubercle arises from the mesial face near the base of the segment (fig. 30).....*guadelupensis* Raffray

***Reichenbachia darlingtoni* Park, new species**

Description. — *Type male:* Head 0.34 long \times 0.39 wide; pronotum 0.41 \times 0.43; elytra 0.60 \times 0.86; abdomen 0.60 \times 0.77; total length 2.0.

Cuticula dull reddish brown, punctulate, more obviously on the elytra; pubescence short and appressed.

Head with a pair of prominent eyes, subcircular in lateral view, of about 34 large ocular facets; three vertexal foveae, a pair between the eyes and one between the

antennal tubercles, each fovea set in a depression so that medianly the vertex is slightly tumid; tempora about as long as eyes; face simply declivous; ventral surface of head with the usual median carinoid ridge.

Antennae as illustrated (fig. 29).

Pronotum with a large pubescent antebasal fovea each side and a smaller, nude, elongate median antebasal fovea; disc simply convex.

Elytra with rounded humeri; elytron bifoveate, an entire sutural stria from sutural fovea and a discal stria from discal fovea; discal stria inclines mesially to end at slightly less than distal three-fourths of elytral length; flank simple.

Abdomen with five visible tergites in median length ratio of 3.8/2.0/1.3/1.2/0.8 with first three strongly margined; basal abdominal carinae short and separated by about 37 per cent of total segmental width. Five sternites medianly visible but the mount of the specimen makes measurement of proportional median lengths unsatisfactory. First sternite relatively very long, second and third much shorter; fourth almost invisible medianly; fifth sternite large and medianly flattened. Metasternum medianly concave; metacoxae well separated; mesofemora especially thicker; tarsi with a long single claw.

Described from two males. The type, deposited in the Museum of Comparative Zoology, was collected by Dr. P. J. Darlington, Jr. in whose honor this species is named, in mountains north of Imias, eastern Oriente, Cuba, between 3,000 and 4,000 ft. elevation, July 25 to 28, 1936. The paratype male, in author's collection, was collected by L. C. Scaramuzza in grasses in Upper Yara Valley, Cuba, October 18, 1928.

Subtribe DECARTHONINA Park

Decarthronina Park, 1951, Geol. Surv. Alabama, Mus. Pap., 31, p. 61.

Genus *Decarthron* Brendel

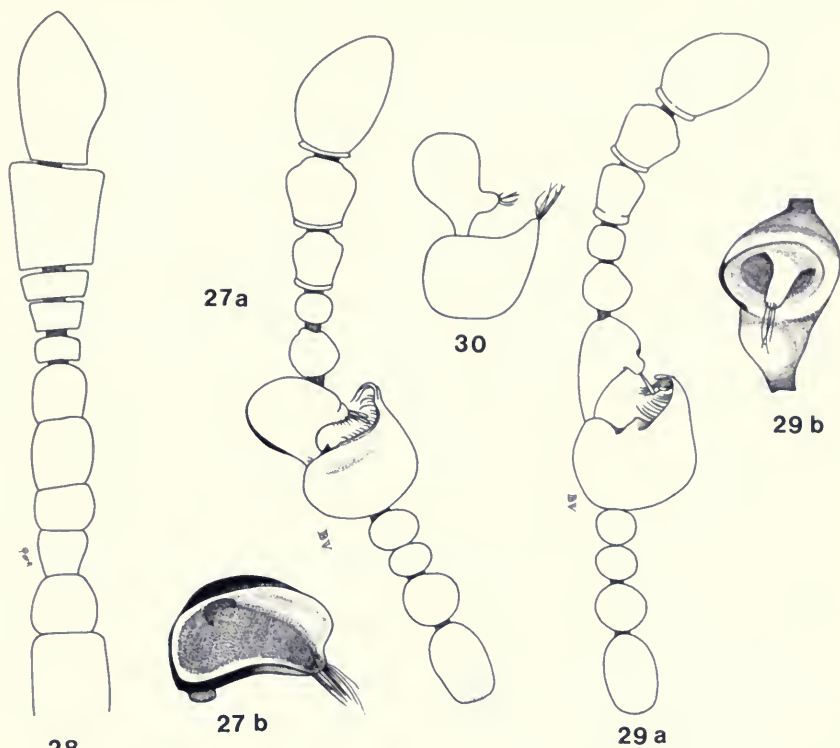
Decarthron Brendel, 1865, Proc. Entomol. Soc. Philadelphia, 5, p. 30.

Type-species: *Decarthron formiceti* (LeConte) 1850, Boston Jour. Nat. Hist., 6, p. 90, Penn., N.J., and Gulf States, U.S. Designated by Bowman, 1934, p. 144.

This is the only genus in the subtribe in the West Indian fauna. There are six known species, all in the subgenus *Decarthron s. str.* Brendel, (1865, p. 30).

The genus is quickly discriminated since both sexes bear on the ventral surface of the head a conspicuous median oval fossa or fovea, and have 10-segmented antennae.

At present only the male sex can be keyed out. This sex has numerous secondary modifications of the antennae, and legs, and the aedeagus is species-specific and subject to great variation in



FIGS. 27-30. 27. *Reichenbachia eucera* (Aubé), male antenna. a, dorsal face. b, ventral face of segment 6. 28. *Reichenbachia grenadensis* Raffray, male antenna (after Raffray, 1904 and modified from Park, 1942). 29. *Reichenbachia darlingtoni* n. sp., antenna. a, dorsal face. b, ventral face of segment 6. 30. *Reichenbachia guadelupensis* Raffray, male antennal segments 5 and 6 (modified from Raffray, 1908).

species details. The females lack such modifications. In the following key to males only five of the six known species can be discriminated. The sixth species, *D. unifoveolatum* (Schaufuss) from Cuba, is known only from the type female. [Park examined the *Decarthron* types in the Paris Museum and the detail in the key which follows is drawn from his examination. J.W.—M.W.S.]

KEY TO THE MALES OF SPECIES OF *Decarthron*

- 1 Profemora with dorsal surface simply swollen in distal three-fourths of length, but the swelling evenly rounded and not marked by carinoid ridge, oval field, spine or other modifications *spinosum* Raffray
- Profemora with distal declivity of dorsal face modified: slightly compressed or bearing a carinoid ridge or an oval field or other modification.....2

- 2 (1) Mesofemur excavated, the excavation, as seen from posterior face, very short (about one-eighth of femoral length and almost one-half of femoral depth); two teeth on dorsal face of mesofemur, one at proximal edge of excavation, and one behind this tooth, both teeth triangularly acute.
insulare Raffray
- Mesofemoral modifications otherwise3
- 3 (2) Mesofemoral excavation bearing a short, wide and truncate spine at proximal margin of excavation.....4
- Mesofemoral modifications very different, mesofemur greatly inflated in distal three-fourths of length where it is abruptly limited at distal seven-eighths; excavation of this inflation subtriangular in profile; near upper edge of excavation the contour is interrupted by an arcuate, lamelloid, spine which continues as a long arcuate seta; aedeagus (fig. 31).
arcuatum Park, n. sp.
- 4 (3) Profemur inflated and bearing a flat, elongate-oval granular patch that is 33 per cent as long as femur and placed obliquely on the dorso-anterior face; aedeagus (fig. 33).....*vauriei* Park
- Profemur inflated and bearing a very narrow, elongate-oval field (this field is subgranular and three times longer than wide) that is 6 per cent as long as femur and placed on the dorsal face of the distal declivity; aedeagus (fig. 32).....*pectinale* Park, n. sp.

***Decarthron arcuatum* Park, new species**

Description. — *Type male:* Head 0.33 long \times 0.34 wide; pronotum 0.33 \times 0.34; elytra 0.52 \times 0.62; abdomen 0.52 \times 0.60; total length 1.7.

Cuticula shining yellowish brown; head, pronotum and elytra subimpunctate, elytra punctate; pubescence longer on elytra and abdomen.

Head with prominent eyes, subcircular in lateral view, each of about 28 large ocular facets; tempora short, about a sixth of lateral eye-length; a pair of nude vertexal foveae on a line through anterior third of eyes, free; face simple, longitudinally declivous, slightly tumid.

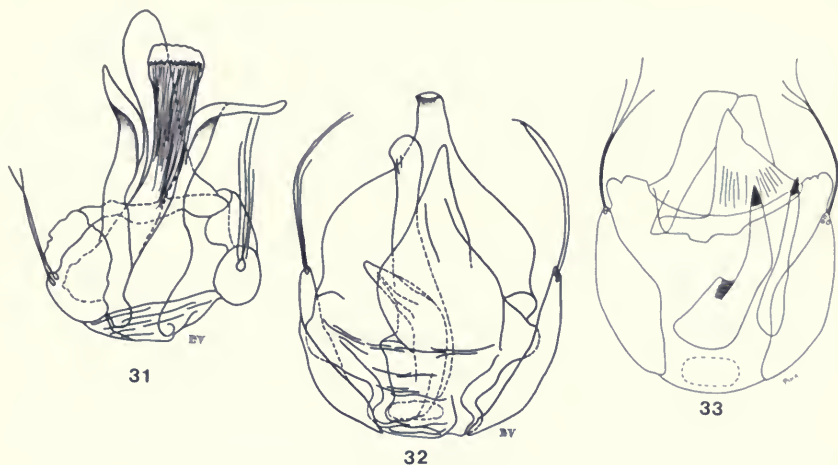
Antennae distantly articulated, 10-segmented, unmodified; club of last three segments; 8 transverse, larger than 7; 9 transversely oblong, larger than 8; 10 largest segment, nearly as long as 8 and 9 united, suboviform.

Pronotum simple, with a small nude median antebasal fovea.

Elytra with rounded humeri; elytron bifoveate, foveae nude; entire sutural stria; weak discal impression to about median point of elytral length; flank simple.

Abdomen with five visible tergites in median length ratio of 3.0/1.0/1.0/1.0/1.0 with first three laterally margined; basal abdominal carinae of first tergite slightly divergent and 0.7 as long at tips as segment and separated at tips by about 50 per cent of total segmental width. Five visible sternites in median length ratio (taken from a paratype male) of 1.1/1.0/0.4/0.4/0.8 with distal margin of fifth medianly indented.

Profemur modified: dilated dorso-ventrally and bearing medianly a short, high carinoid lamella on distal declivity. Mesofemur modified: greatly inflated in distal



FIGS. 31-33. 31. *Decarthron arcuatum* n. sp., aedeagus, dorsal face. 32. *Decarthron pectinale* n. sp., aedeagus, dorsal face. 33. *Decarthron vauriei* Park, aedeagus, dorsal face (after Park, 1954).

three-fourths of length where it is abruptly limited at distal seven-eighths of mesofemoral length; in profile this inflation excavated, the latter subtriangular in profile; near the upper edge of this excavation its contour is interrupted by an arcuate, lamelloid spine which is continued as a still more arcuate seta; aedeagus (fig. 31).

Described from nine specimens (type male and eight paratypes, of which the type and four paratypes are deposited in the Museum of Comparative Zoology, and four paratypes in the collection of the author). The type was collected by B. B. Leavitt in 1932 in central Cuba; he also collected two males in central Cuba in August, 1932. One male was taken by P. J. Darlington, Jr. in Cienfuegos, Soledad, Cuba in May, 1936. Five were obtained by C. T. Parsons in Cienfuegos, Soledad, Cuba in June-July, 1939.

This new species appears most closely allied to *D. pectinale*, also from Cuba. The aedeagi of *D. pectinale* (fig. 32) and *vauriei*, (fig. 33) are more similar in basic features than is either to *D. arcuatum* (fig. 31). *D. vauriei* was described from South Bimini, Bahamas.

***Decarthron pectinale* Park, new species**

Description. — *Type male:* Head 0.26 long \times 0.30 wide; pronotum 0.40 \times 0.43; elytra 0.51 \times 0.69; abdomen 0.43 \times 0.69; total length 1.6.

Cuticula shining reddish brown; subimpunctate; pubescence longer on elytra and abdomen.

Head with prominent eyes, subcircular in lateral view, each of 28 large ocular facets; pair of free vertexal foveae on a line passing through second row of facets; tempora short, about one-sixth of lateral eye-length.

Antennae distantly articulated, 10-segmented; unmodified; club of last three segments: 8 slightly larger than 7 and subquadrate-subcircular; 9 distinctly longer than 8, transversely subcircular; 10 oviform, nearly as long as preceding three segments united.

Pronotum and elytra as described for *D. arcuatum*.

Abdomen with five visible tergites in median length ratio of 3.2/1.0/1.0/0.07/1.0 with first three laterally margined; basal abdominal carinae divergent, a little more than half as long as first tergite and separated at tips by about 40 per cent of total segmental width. Five visible sternites in median length ratio of 3.0/0.2/0.2/0.2/0.04 with the last slightly concave and with distal margin elevated.

Profemur modified: medianly moderately dilated and bearing a very narrow, elongate-oval field (this field is subgranular and three times longer than wide), and varies from 6 per cent to 10 per cent as long as femur; this narrow field is placed on the distal declivity of dorsal face.

Mesofemur modified: inflated at distal three-fourths of length, this distal declivity excavated and bearing a short, truncate spine at proximal margin of the declivity. Aedeagus (fig. 32).

Described from 11 males (type male and 10 paratypes, of which the type and five paratypes are deposited in the Museum of Comparative Zoology, and five paratypes in the author's collection). The type was collected by B. B. Leavitt March 1, 1932, in Soledad, Cuba. One paratype was collected by L. C. Scaramuzza, February 8, 1927, at light at Baragua, Cuba. Three were taken by C. T. Parsons at Cienfuegos, Soledad, Cuba. The other six were collected by B. B. Leavitt: two at Santa Clara, Soledad, Cuba, July to September, 1932.

This new species at present appears most closely allied to *D. arcuatum*, also from Cuba, but the male leg modifications and aedeagi quickly separate them. The aedeagus of *D. pectinale* (fig. 32) appears structurally to be more allied to the aedeagus of *D. vauriei* (fig. 33) described from the Bahamas.

Subtribe EUPSENIINA Park

Eupseniina Park, 1951, Geol. Surv. Alabama, Mus. Pap., 31, p. 61.

Genus *Eupsenius* LeConte

Eupsenius LeConte, 1850, Boston Jour. Nat. Hist., 6 (1), p. 90.

Type-species: *Eupsenius glaber* LeConte, 1850, loc. cit., South Carolina, U.S.; Park (1954) lists Southern U.S., and South Bimini, Bahamas.

This is the only genus of the subtribe in the West Indies and is easily discriminated. The ventral surface of the head is unmodified, lacking either the fossa of Decarthronina, or the median carinoid ridge of Brachyglutina. Furthermore, the cuticula is glabrous except for special areas. This polished, glabrous, convex body, an unusually large last antennal segment and large vertexal foveae form a habitus quickly discerned.

In the key that follows one West Indian species, *Eupsenius dominicanus* Schaufuss (1887a, p. 108), is excluded. The authenticity of its habitat is not in question. The species was represented by an unique specimen which lacked both antennae (*teste* Raffray, 1896, p. 265) and was included in the genus by Raffray (1911, p. 111) with reservation. Unfortunately, the species of *Eupsenius* have few secondary sex characters or other major differences, so that the antennae become of great importance in species separation.

On the other hand, included in the following key is *Eupsenius rufus* LeConte (1863, p. 28) which is known from Florida and Alabama and may occur in the Bahamas since the type species *Eupsenius glaber* (1850, p. 90) is known from several southeastern states and the Bahamas (Park, 1954).

KEY TO THE WEST INDIAN AND NORTH AMERICAN SPECIES OF *Eupsenius*

- 1 Visible portion of antennal segment 10 twice as large as the visible portion of antennal segment 9 *gracilis* Raffray
 - Visible portion of antennal segment 10 not this large, usually slightly wider and longer than antennal segment 9 but never twice as long as 9. 2
 - 2 (1) Distal (11) antennal segment relatively long and slender (including the closely appressed pubescence, slightly more than twice as long as its greatest width) 3
 - Distal (11) antennal segment relatively shorter and thicker (including the closely appressed pubescence, never twice as long as its greatest width, usually from one-fourth to two-fifths longer than wide) 4
 - 3 (2) No median pronotal antebasal fovea or foveoid impression of any kind at center of transverse antebasal line *politus* Reitter
 - A minute median fovea at center of antebasal line *pretiosus* Park
 - 4 (2) Pronotum rather suddenly narrowed at the transverse antebasal line, the sides subparallel from this line to basal margin, and the greatest pronotal width being related to the basal margin, and the greatest pronotal width being related to the basal third width in a ratio of about 5 to 4.
- glaber* LeConte

Pronotum gradually narrower from the maximum width to basal margin, the ratio of maximum width to basal third about 5 to 4.75 (not known to occur in West Indies).....*rufus* LeConte

Tribe CTENISTINI Raffray

Ctenistini Raffray, 1890a, Rev. d'Entomol., 9, pp. 140, 141.

This is the first time that a member of this tribe has been reported from the West Indies.

Genus *Ctenisodes* Raffray

Ctenisodes Raffray, 1896, Ann. Soc. Entomol. France, 65, p. 274.

Type-species: *Ctenisodes laticeps* Raffray, loc. cit., p. 275, Mexico.

Ctenisodes weberi Park, new species

Description. — *Type male*: Head including cervicum 0.41×0.41 wide; pronotum 0.34×0.41 ; elytra, including squamous posterior fringe 0.69×0.72 ; abdomen 0.63×0.72 ; total length 2.

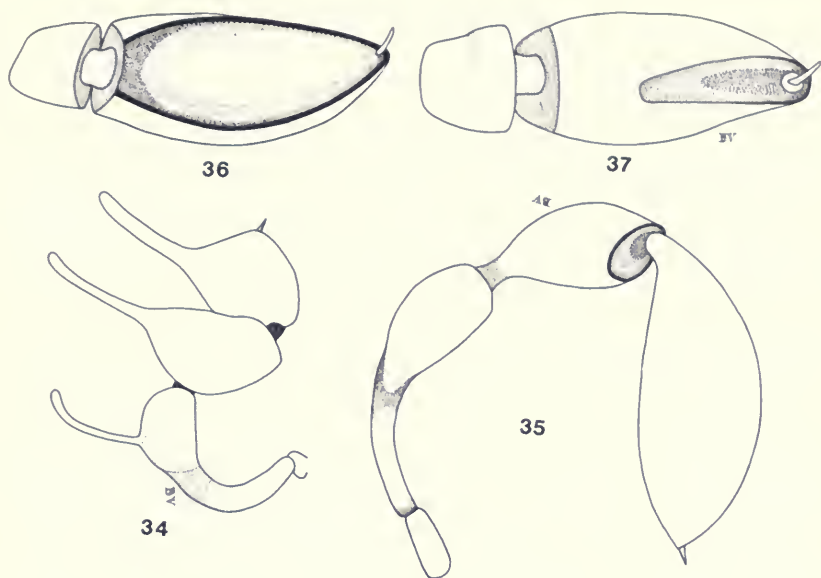
Cuticula shining reddish brown but obscured by the white masses of squamous pubescence. Most of the face, antennal incisures, cephalic foveae, anterior and posterior corners of pronotum, pronotal and elytral foveae, posterior edges of elytra, and intersegmental abdominal conjunctivae are densely covered. The general and rather sparse scales of pronotum, elytra and abdomen are short, flat and arcuate. The amount of pubescence has been reduced intentionally in Figure 40 so as not to obscure many anatomical features.

Head with very large eyes of about 24 ocular facets; three pubescent foveae on the top of the head, the usual pair between the eyes and one at base of antennal tubercle; the head narrows suddenly anterior to eyes and then expands to form an antennal tubercle; face excavated beneath the tubercle, the excavation crowded with white, massed pubescence in the upper portion, except for a very narrow, vertical lamina at center. Lower portion of the face simple and extended laterally and ventrally each side. Labrum short and very transverse. Maxillary palpi as illustrated (fig. 34).

Antennae approximate on the antennal tubercle, very long, being about half as long as body (1); 11-segmented: 1 quadrate; 2 slightly shorter than 1 and quadrate; 3 to 7 subequal in width and elongate; 8 quadrate and slightly longer than 7; a poorly differentiated club of the last three segments; 9 about as long as 8, slightly wider; 10 about as long as 9 and slightly wider; 11 elongate, slightly wider than 10 at base and increasingly wider apically, slightly shorter than segments 7-10 united.

Pronotum and elytra as illustrated (fig. 40).

Abdomen with five normally visible tergites, the first three strongly margined. The anterior margin of the first visible tergite also with a heavily pubescent anterior margin, but in life probably is covered by the heavily pubescent posterior elytral margins; fifth tergite vertical. Seven sternites, the seventh in the form of a minute median plate which is just discernible.



FIGS. 34-37. **34.** *Ctenisodes weberi* n. sp., right maxillary palpus, ventral view. **35.** *Neotyrus tobagoensis* n. sp., ventral view of right maxillary palpus. **36.** *Hamotus* (*Hamotus*) *soror* Raffray, mesial view of right maxillary palpus. **37.** *Apharus hexagonus* n. sp., mesial view of right maxillary palpus.

Legs slender, not modified except that the ventral surfaces of protrochanter and profemur bear erect, stiff setae. Tarsi 3-segmented, the third with a pair of strong tarsal claws. Metasternum medianly sulcate.

Described on an unique male, the type, deposited in the Museum of Comparative Zoology. It was obtained by Berlese funnel by N. A. Weber, in whose honor this species is named, near Cienfuegos, Soledad, Cuba, August 6, 1920.

Its only ally is *Ctenisodes laticeps* Raffray, (1897, p. 275) the type species and until now the only known species. *C. laticeps* was described from Mexico. Some time ago I obtained a female of *laticeps* from Montemorelos, Nuevo Leon, Mexico which was collected with ants by Dr. Charles Seevers. I compared this specimen with the type in the Paris Museum. The unique maxillary palpi of *Ctenisodes* (cf. Park, 1942, pp. 291-294) illustrated in the present paper (fig. 34) and general pubescent pattern are similar in *laticeps* and *weberi* but *laticeps* is smaller, more slender, with a relatively longer abdomen. The antennal segment proportions are also different, but in this tribe sexes frequently vary in this matter.

Tribe TYRINI Raffray

Tyrini Raffray, 1890a, Rev. d'Entomol., 9, p. 162.

KEY TO GENERA OF TYRINI

Distal (fourth) segment of maxillary palpi bearing short, stiff rod-like setae (fig. 41b).

Ephimia Reitter

Distal (fourth) segment of maxillary palpi nude, or bearing minute, appressed setae if discernible*Neotyrus* Raffray

Genus *Ephimia* Reitter

Ephimia Reitter, 1883, Deut. Entomol. Z., 27, p. 34.

Type-species: *Ephimia simoni* Reitter, loc. cit., St. Thomas, Virgin Islands.

This genus has had a complicated taxonomic history — too complex to go into here. The major references are as follows. Raffray (1904, 1908, 1911) placed *Ephimia* in the tribe Hybocephalini. Park (1942, p. 289) followed this course, but noted that it could hardly belong in the Hybocephalini since it was the only genus in the tribe with a non-bilobed second tarsomere and having two equal tarsal claws, and consequently would key out to either the tribes Ctenistini or Tyrini. Also in the 1942 paper Park erected the genus *Juxtahamotopsis* (p. 303) in the tribe Tyrini. *Juxtahamotopsis* is a synonym of *Ephimia*.

Jeannel (1949) erected the tribe Odontalgini and included *Ephimia*, and in a later classification of Pselaphidae (1955) maintained this position. But not all species of *Ephimia* have squamous pubescence on the sides of the head, so the genus cannot be placed in Odontalgini. Blackwelder (1944, p. 95) places *Ephimia* in the tribe Hybocephalini and included all of the Ctenistini.

Ephimia cannot be in Ctenistini as the general body pubescence is aciculate, not squamous. *Ephimia* is placed in the tribe Tyrini in the present paper until more thorough information can be accumulated. The genus is strictly Neotropical, and the last segment of the maxillary palpus (fig. 41b) is diagnostic.

KEY TO SPECIES OF *Ephimia*

- | | | |
|-------|--|-----------------------|
| 1 | Pubescence on sides of head squamous..... | 2 |
| | Pubescence on sides of head not squamous..... | 3 |
| 2 (1) | Antennal segments 3 to 8 very transverse and lenticular, or transversely bean-shaped | <i>simoni</i> Reitter |

- Antennal segments 3 to 8 transverse-trapezoidal.....*cubensis* Park, n. sp.
- 3 (1) Antennal segments 9 and 10 quadrate, subequally long; metasternum concave.....male *subnitida* Raffray
- Antennal segment 9 transverse, 10 subquadrate, nearly twice as long as 9; metasternum convex.....female *subnitida* Raffray

Ephimia cubensis Park, new species

Description. — *Type (male?)*: Head 0.29 long \times 0.27 wide; pronotum 0.36 \times 0.34; elytra 0.43 \times 0.60; abdomen 0.50 \times 0.60; total length 1.6 (fig. 41a).

Cuticula shining reddish-brown with paler appendages; sides of head both anterior of eyes and along genal margin bearing squamous setae, antennal segments with subsquamous setae, general body pubescence bearing long, aciculate, thinly distributed setae, subimpunctate.

Head only slightly longer than wide; eyes large and coarsely faceted; antennal rostrum bisected by a longitudinal sulcus; a pair of free, pubescent vertexal foveae in a shallow transverse depression between rostrum and convex vertex. Maxillary palpi with distal (4) segment as for genus (fig. 41b).

Antennae 11-segmented, rather closely articulated on either side of rostrum; segments 3 to 8 transverse, trapezoidal; club well-formed, of last three; 9 quadrate with length and width subequal; 10 longer than wide in a ratio of 5/4; 11 as long as 9 and 10 united, slightly less than two times longer than wide, ovoidal.

Pronotum with strongly convex, simple disc; three large free, pubescent antebasal foveae.

Elytra with sloping humeri; elytron with two large pubescent antebasal foveae; entire sutural stria, the raised interval sacrificed; short discal impression from each discal antebasal fovea; flank not foveate but slightly impressed from dorsal view near humeral angle.

Abdomen with five visible tergites, the first three with relative proportions as illustrated, fourth subvertical and fifth vertical and not visible from a dorsal view; first three tergites with strong lateral margins.

Legs with femora, especially the anterior pair, medianly inflated; tibiae arcuate; tarsi tyrine with two large, subequal tarsal claws.

Described from one specimen, the type, which is probably a male, in the Museum of Comparative Zoology. Collected by B. B. Leavitt in 1932 in Soledad, Cuba.

The nearest ally of *E. cubensis* would appear to be *E. simoni* Reitter (1883) from St. Thomas, Virgin Islands but it differs, among other features, in antennal structure, as noted in the key to species of this perplexing genus.

Genus Neotyrus Raffray

Neotyrus Raffray, 1895, Ann. Soc. Entomol. France., 64, p. 396.

Type-species: *Neotyrus gibbicollis* (Schaufuss), 1886, Tijdschr. Entomol., **29**, p. 269 (*Aplodea*), Amazon Basin, Brazil.

***Neotyrus tobagoensis* Park, new species**

Description. — *Type male:* Body proportions as illustrated (fig. 38a); total length 2.3.

Cuticula shining reddish brown; head coarsely scabropunctate dorsally except for median rostro-vertexal sulcus and vertexal foveal sulci; pronotum subimpunctate; elytra and abdomen with sparse and weakly developed broad punctural impressions; pubescence reddish golden, long and appressed except for the bristling pencil of setae at apex of each genal tumulus.

Head with a pair of large eyes composed of very numerous, small facets; a pair of nude, shallow vertexal foveae on a line with posterior eye margins, each fovea in a free, slightly arcuate, glabrous sulcoid impression; these impressions separated by a median sulcus from a point between the vertexal foveae forward, over vertex and most of face; the fronto-rostral portion of this median sulcus becomes declivous, scabro-punctate, and terminates in an arcuate anterior margin; this margin bisects the face as a median, subvertical fronto-clypeal strip with a deep antennal acetabulum on each side; this strip ventrally joins a short, scabro-punctate clypeal margin; labrum with a narrow, glabrous median portion and is laterally subgranulate; mandibles strong, left crossed dorsal to right; maxillary palpi typical of genus, and with palpal segments as illustrated (fig. 35); ventral surface of head granulate-punctate with a basal gular fovea; each gena produced in a brief latero-posterior tumulus.

Antennae 11-segmented, rather closely articulated on the antennal rostrum, with segmental proportions as illustrated (fig. 38b); club well-formed of the last three segments.

Pronotum rounded-hexagonal; a small median, and a large lateral fovea on each side, these three foveae united by a U-shaped antebasal sulcus, which, in turn, lies in a shallow U-shaped impression; disc convex, becoming elevated just above the median fovea in a prominent, subacute tumulus.

Elytra with rounded humeri; elytron bifoveate, an entire sutural stria from sutural fovea, and a long, broad discal impression from discal fovea with the mesial wall of this impression rather abruptly raised; flank not foveate.

Abdomen with five tergites but from a dorsal view the very large first tergite comprises almost all of the dorsum; first two tergites with lateral margins obvious; second and third tergites declivous, fourth tergite vertical, fifth tergite inclined ventro-anteriorly. Seven sternites, but the first obscured by pubescence; median length ratio of second to seventh 2.5/0.8/0.8/0.8/1.0/0.6 with the seventh in the form of a small operculum which fits into the posterior margin of the last tergite.

Metasternum glabrous; deeply medianly concave, the concavity margined laterally by a carinoid ridge each side, this ridge erected medianly as a large, triangular tooth; base of metasternum with a large, circular, pubescent fovea.

Legs well-developed; protrochanters with a ventro-distal tooth; profemora medianly erected into a glabrous, high carinoid ridge; mesotrochanters with a strong ventro-distal tooth; mesofemora with an obliquely flattened, glabrous, elongate-oval field; tarsi with two claws, one of which is slightly longer and thinner, both acute.

Based on a unique male, the type in author's collection. Collected by the Rev. E. J. Pearce on April 4, 1961 in a rotten log near Scarborough, Tobago.

The nearest known ally is *Neotyrus harem* Park (1942, p. 301) from within the nest of the termite *Coptotermes niger* Snyder, on Barro Colorado Island, Panama Canal Zone. *N. harem* differs from the above description of *tobagoensis* in a number of ways: (1) the median cephalic sulcus continues to be glabrous over the face; (2) the vertex and occiput are sparsely and weakly granulate; (3) the vertexal foveae lie in short, oblique sulci which are directed laterally; (4) the clypeus is but weakly granulate. These two species are separated by about 1,300 miles of longitude and *tobagoensis* should occur in the large Venezuelan fauna; it is wholly different from the Brazilian *gibbicollis* (Schaufuss) (1886, p. 269) in which the antennae have segments 1 through 9 longer than wide, and 10 obcordate; it differs markedly from *coptocolus* Park (1942, p. 299) known from the termitarium of *Coptotermes niger* Snyder on Barro Colorado Island, Panama Canal Zone. *N. coptocolus* differs from both *tobagoensis* and *harem* in having the entire integument opaque and coarsely granulate-asperate, with short, stiff pubescence.

Tribe HAMOTINI Park

Hamotini Park, 1951, Geol. Surv. Alabama, Mus. Paper., 31, p. 67.

KEY TO GENERA AND SUBGENERA OF HAMOTINI

- | | |
|-------|--|
| 1 | Distal segment (4) of maxillary palpi with the mesial face bearing a sulcus for distal half only (fig. 37)..... <i>Apharus</i> Reitter |
| | Distal segment (4) of maxillary palpi with mesial face bearing entire sulcus from apex to base (fig. 36)..... <i>Hamotus</i> Aubé.....2 |
| 2 (1) | Pronotum with three free antebasal foveaeSubgenus <i>Hamotus</i> Aubé |
| | Pronotum with the three antebasal foveae united by a sulcus.
<i>Subgenus Hamotoides</i> Schaufuss |

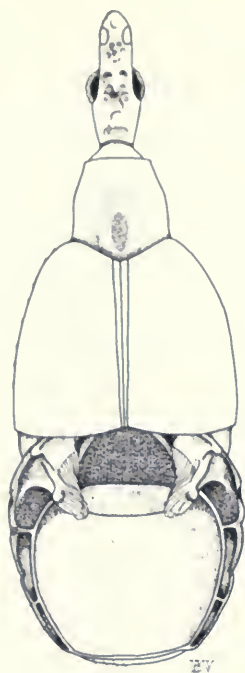
Genus *Apharus* Reitter

Apharus Reitter, 1882, Deut. Entomol. Z., 26 (1), p. 129.

Type-species: *Apharus mulleri* Reitter, loc. cit., p. 130, Sao Paulo, Brazil.

Apharus hexagonus Park, new species

Description. — *Type male:* Head 0.26 long \times 0.33 wide; pronotum 0.34 \times 0.38; elytra 0.50 \times 0.79; abdomen 0.46 \times 0.64; total length 1.56.

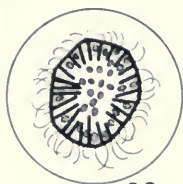


39 a

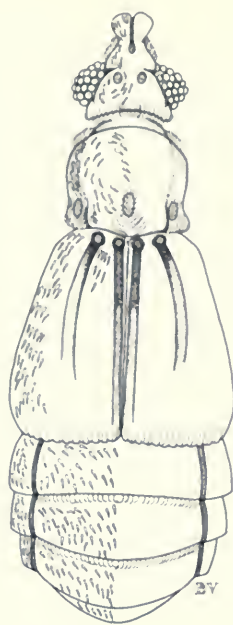


39 b

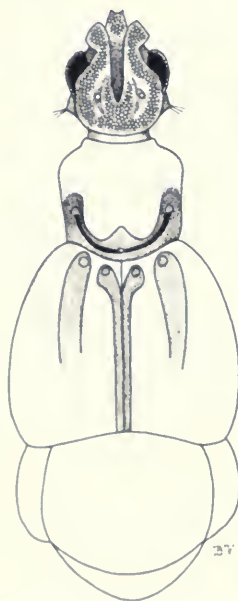
38 b



39 c



40



38 a



41 b



41 a

Cuticula shining dark reddish brown; subimpunctate; pubescence reddish golden; the setae long but longer on elytra, semi-appressed and aciculate.

Head rounded trapezoidal with a pair of prominent eyes of fairly large facets; vertex medianly bearing a small, weak, circular impression; a pair of nude, free vertexal foveae each closer to its adjacent eye than to each other; antennal tubercle short, broad and bisected by a broad, longitudinal sulcus; front narrow and vertical; clypeus rounded obtriangular; labrum short and transverse; mandibles strong, left crossed dorsal to right; gular field flattened, glabrous, with a basal gular fovea and each lateral margin extended as a strong, arcuate lamina; maxillary palpi typical of genus, last two palpal segments illustrated (fig. 37).

Antennae 0.77 long, 11-segmented; 1 elongate; 2 shorter and quadrate; 3 to 8 transverse sublenticular, shorter than second; club of last three with 9 and 10 trapezoidal, 10 larger than 9; 11 largest, seven times longer than 10, subovoidal.

Pronotum rounded-hexagonal, disc convex, a small, free, nude antebasal fovea; the usual pair of lateral foveae are apparently absent.

Elytra with rounded, slightly elevated humeri; elytron bifoveate, the sutural at origin of entire sutural stria, the discal at origin of a short, weak discal impression, and the flank simple and not foveate.

Abdomen with five visible tergites in median length ratio of 2.6/1.0/1.0/1.0/1.8 with last vertical and rounded rhomboidal; first three margined; five visible sternites (first hidden by pubescence and visible only laterally), the second to sixth in a median length ratio of 1.4/0.6/0.2/0.2/0.25 and slightly flattened medianly.

Legs with protrochanters each bearing a ventrodorsal spine; profemora each with a tooth, which is inclined anteroventrally, at center of length; tarsi with two claws.

Described from a unique male, the type specimen in author's collection. Collected by Rev. E. J. Pearce on April 1, 1961, on the Courland Estate, near Scarborough, Tobago. The nearest ally known is *A. armipes* Raffray (1891, p. 318) from Caracas, Venezuela. Among other features these two species differ in the male metasternum. In *hexagonus* the metasternum is medianly sulcoid and the lateral walls are simply tumuloid, whereas in *armipes* the median sulcus is bounded each side by a large tuberculate tooth.

Genus *Hamotus* Aubé

Hamotus Aubé, 1844, Ann. Soc. Entomol. France, (2) II, p. 92.

Type-species: *Hamotus lateritius* Aubé, loc. cit., p. 92, Venezuela; Colombia.

Opposite:

FIGS. 38-41. **38.** *Neotyrus tobagoensis* n. sp., a, dorsal view. b, antenna. **39.** *Fustiger jamaicaensis* n. sp., a, dorsal view. b, outline of antenna. c, truncate tip of last antennal segment showing pubescence and presumed sensory organs. **40.** *Ctenisodes weberi* n. sp., dorsal view. **41.** *Ephimia cubensis* n. sp., a, dorsal view. b, maxillary palpus segments 3 and 4.

This large, chiefly neotropical genus has a characteristic distal segment of the maxillary palpi bearing an entire, longitudinal sulcus on the mesial face (fig. 36). For a general discussion see Park (1942, pp. 308-332).

Hamotus Subgenus **Hamotus** *sensu* Aubé

Hamotus Raffray, 1904, Ann. Soc. Entomol. France, **74**, p. 388; Genera Insectorum, 64th Fascicle, p. 398.

Hamotus (Hamotus) soror Raffray, 1904, loc. cit., p. 403. Described from Caracas, Venezuela; also known from Trinidad and Tobago in the West Indies.

Hamotus Subgenus **Hamotoides** Schaufuss

Hamotoides Schaufuss, 1887, Berlin. Entomol. Z., **31**, p. 298.

Hamotus (Hamotoides) hirtus Raffray, 1904, Ann. Soc. Entomol. France **74**, p. 408. Described from Grenada (Windward Islands); also now known from St. Vincent (Windward Islands) and Guadeloupe (Leeward Islands).

Subfamily CLAVIGERINAE

Clavigerinae Redtenbacher, 1849, Fauna Austriaca, pp. 58, 647.

Tribe FUSTIGERINI

Fustigerini Jeannel, 1949, Mem. Mus. Nat. d'Hist. Nat., N. S., **29**, p. 31.

KEY TO GENERA OF FUSTIGERINI

Third (distal) antennal segment with a transverse suture near middle of length.

Pseudofustiger Reitter

Third (distal) antennal segment entire, lacking such a suture*Fustiger* Brendel

Genus Pseudofustiger Reitter

Pseudofustiger Reitter, 1884, Deut. Entomol. Z., **28**, p. 167.

Type-species: *Pseudofustiger stricticornis* (Reitter), 1883, Deut. Entomol. Z., **27**, p. 33 (*Articerus*). St. Thomas, Virgin Islands.

KEY TO SPECIES OF *Pseudofustiger*

Pronotum wider than long*stricticornis* (Reitter)

Pronotum longer than wide.....*barroi* Bierig

Genus **Fustiger** Brendel

Fustiger Brendel, 1866, Proc. Entomol. Soc. Philadelphia, p. 189.

Type-species: *Fustiger fuchsii* Brendel, loc. cit., p. 190. Tennessee, U.S.A.

KEY TO SPECIES OF *Fustiger*

- | | |
|-------|--|
| 1 | Mesofemora unarmed.....2 |
| | Mesofemora bearing a very long, arcuate, blunt spine which is about one-third as long as femur.....male <i>haytiana</i> Mann |
| 2 (1) | Pronotum quadrate, as wide as long.....3 |
| | Pronotum subconical, longer than wide.....male <i>smithi</i> Raffray |
| 3 (2) | Head almost three times longer than wide.....female <i>schwarzi</i> Mann |
| | Head only slightly more than two times longer than wide.
female <i>jamaicensis</i> Park, n. sp. |

Fustiger jamaicensis Park, new species

Description. — *Type (female?)*: Head (including cervicum) 0.48 long \times 0.22 wide; pronotum 0.31 \times 0.31; elytra 0.55 \times 0.77; abdomen 0.72 \times 0.78; total length 2.

Cuticula shining reddish brown with elytra paler yellowish brown; head weakly and irregularly scabropunctate, rest of body subimpunctate; general body pubescence sparse, short and inconspicuous.

Head with proportions as illustrated (fig. 39a); eyes of about 22 rather large facets, slightly subreniform in lateral view as a consequence of a triangular piece of the gena intruding at the ventro-posterior eye margin; a pair of small, free vertexal foveae on a line through posterior eye margins.

Antennae 3-segmented as illustrated (fig. 39b); segment 3 (distal) 0.64 mm. long, very elongate-obconical, gradually increasing in diameter to apex with an arcuation near distal three-fourths. The truncate end of this segment warrants special notice: this surface is depicted in Figure 39c. The surface is not flush, but concave. When observed directly from above the scanty, thin, general pubescence is seen around its perimeter; on the edge of the area are about two dozen rod-shaped special setae; scattered over the concavity are numerous small, round to oval bodies, the surfaces of which seem to be dotted, as by small pores. The rod-like setae may be tactile receptors; the oval bodies may be chemoreceptors.

Pronotum with a large, gradually deepening median fovea.

Elytra with rounded humeri; elytron with no basal foveae apparent, but with an entire sutural stria; no discal impression, and flank unmodified.

Abdomen dorsally almost wholly comprised of the large tergal field composed of the first three visible tergites, the margins of which are visible laterally; this tergal field convex for distal three-fourths, and then becoming deeply concave in proximal fourth, beneath the posterior elytral margins, and glabrous; first tergite bearing a pair of trichomes at base (fig. 39a). The golden trichomal brush of special setae lies on the mesial margin of a complex base which arises from the margin of the segment, each

side. Fourth tergite barely visible from above; fifth (terminal) tergite rounded-triangular. Six visible sternites in median length ratio of 1.0/3.2/1.0/0.8/0.4/1.4 with the second transversely deeply concave at base.

Metasternum strongly convex, with a few setae on the crest of the convexity.

Legs slender and unmodified by spines or teeth; typical clavigerine tarsi of three segments, the first two very short and the last long, slender and subcylindrical and bearing a single tarsal claw.

This new species is based on a single specimen, the type, in the collection of the Illinois Natural History Survey. The sex is in some doubt but is assumed to be a female. It was collected by Milton W. Sanderson by beating and sweeping vegetation in Hardwar Gap, Jamaica on June 25, 1958. The nearest ally to *F. jamaicaensis* is also in doubt but *jamaicensis* has some affinities with *schwarzi* Mann from Cayamas, Cuba.

CHECKLIST

FARONINAE (Jeannel, 1949, p. 15)

FARONINI (Raffray, 1890a, p. 82)

Coccoplectus Sharp (1887, p. 22)

bellingeri Park (1955, p. 101) Jamaica

PYXIDICERINI (Raffray, 1903, p. 504)

Bythinoplectus Reitter (1881, p. 195; 1883, p. 37)

acutangulus Raffray (1904, p. 503) Grenada

bahamicus Park (1954, p. 3) Bahamas

**foveatus* Reitter (1883, p. 37) St. Thomas

laminatus Park, n. sp. Tobago

PSELAPHINAE (Redtenbacher, 1849, p. 57)

JUBININI (Raffray, 1903, p. 507)

Balega Reitter (1883, p. 43)

**elegans* Reitter (1883, p. 43) St. Thomas

intermedia Park (1960, p. 5) Jamaica

longiceps Park, n. sp. Dominican Republic

Stratus Schaufuss (1872, p. 246, 452)

dominicanus Park, n. sp. Dominican Republic

hirsutus Park, n. sp. Dominican Republic

Jubus Schaufuss (1872, p. 455)

clavatus Raffray (1903, p. 511) Grenada

insularis Raffray (1908, p. 31) Guadeloupe

TANYPLEURINI (Jeannel, 1949, p. 79)

DALMODIINA (Park, 1951, p. 61)

Insulomodes Park, n. g.

**tobagoensis* Park, n. sp. Tobago, Grenada, Trinidad

excavatus Park, n. sp. Tobago

Euharmophola Park (1960, p. 23)

**carinata* Park (1960, p. 23) Jamaica

Dalmonexus Park (1942, p. 272)

tobagoensis Park, n. sp. Tobago

TANYPLEURINA s. str. (Jeannel, 1949, p. 79)

Buris Fletcher (1928, p. 227)

ensipes (Raffray) (1891, p. 316) Venezuela, Trinidad, Antigua

Bythinophysis Raffray (1908, p. 266)

humilis (Raffray) (1908, p. 39) Guadeloupe

EUPLECTINI s. lat. (Park, 1942, p. 63)

RHINOSCEPSINA (Bowman, 1934, p. 144)

*Type-species: if West-Indian in range

- Rhinosceps** LeConte (1878, p. 382)
insularis Park (1955, p. 105)Jamaica
- TROGASTRINA** (Jeannel, 1949, p. 75)
Eurhexius Sharp (1887, p. 41)
incertus Park, n. sp.Tobago
- Rhexinia** Raffray (1890a, p. 104, 106)
versicolor Raffray (1908, p. 37)Guadeloupe
- PANAPHANTINA** (Jeannel, 1950, p. 76)
Thesiectus Park (1960, p. 8)
**probus* Park (1960, p. 9)Jamaica
- Thesium** Casey (1884, pp. 94, 117)
affabilis Park (1960, p. 6)Jamaica
antennalis Park (1955, p. 106)Jamaica
pearcei Park, n. sp.Tobago
cornutum Park (1960, p. 8)Jamaica
frontalis Park (1955, p. 108)Jamaica
- BIBLOPORINA** (Park, 1951, p. 64)
Biblomimus Raffray (1903, p. 62)
**minutus* Raffray (1903, p. 62)Guadeloupe
impressa Raffray (1908, p. 36)St. Vincent
- EUPECTINA** s. str. (Jeannel, 1949, p. 45)
Thesiastes Casey (1893, p. 444, 457)
liliputanus Raffray (1904, p. 543)Grenada
hopensis Park, n. sp.Jamaica
- Euplectus** Leach (1817, p. 80)
exiguus Raffray (1903, p. 542)Grenada
insularis Raffray (1908, p. 35)Guadeloupe
illepidus Raffray (1903, p. 542)St. Vincent
gouyavensis Park, n. sp.Grenada
episcopalis Park, n. sp.Tobago
- TRIMIINA** (Jeannel, 1950, p. 139)
Malleiceps Park (1954, p. 1)
pearcei Park, n. sp.Puerto Rico
**darlingtoni* Park (1954, p. 1)Dominican Republic
- Hanfordia** Park (1960, p. 10)
**absoluta* Park (1960, p. 10)Jamaica
- Dalmomelba** Park (1954, p. 6)
**cazieri* Park (1954, p. 6)Bahamas
- Lemelba** Park (1953, p. 1)
hirsuta Park, n. sp.Dominican Republic
millsi Park, n. sp.Cuba
- Haasiella** Park, n. g.
**medicina* Park, n. sp.Puerto Rico
- Actium** Casey (1886, p. 201)
visendum Park (1955, p. 109)Jamaica
opacum Park (1960, p. 14)Jamaica
haasi Park, n. sp.Puerto Rico
- Melba** Casey (1897, p. 565)
M. (Rameloidea) Park (1942, p. 14)
**temporalis* Raffray (1909, p. 16)Martinique

- M. (Cismelba)* Park (1960, p. 16)
**trifoveata* Park (1960, p. 16).....Jamaica
M. (Frontelba) Park (1942, p. 120)
clypeata (Reitter) (1883, p. 40).....St. Thomas
**frontalis* (Raffray) (1908, p. 35).....Guadeloupe
M. (Melba) s. str. (Casey) (1897, p. 565)
crassipes Raffray (1908, p. 34).....Guadeloupe
grenadensis Raffray (1903, p. 535).....Grenada
zonula Park (1954, p. 13).....Bahamas
specularis (Reitter) (1883, p. 38).....St. Thomas, Water Island
gibbula (Reitter) (1883, p. 39).....St. Thomas
M. (Perimelba) Park (1943, p. 183)
jamaicensis Park (1955, p. 114).....Jamaica
hoffi Park (1960, p. 15).....Jamaica
Latomelba Park (1955, p. 111)
**quadrisicca* Park (1955, p. 112).....Jamaica
sympatrica Park (1960, p. 12).....Jamaica
Quadrelba Park (1942, p. 120)
**parmata* (Reitter) (1883, p. 40).....Puerto Rico, St. Thomas
inconspicua (Reitter) (1883, p. 41).....St. Thomas
ventricosa (Reitter) (1883, p. 39).....Puerto Rico, St. Thomas
Ramelbida Park (1942, p. 112)
**quadrioveata* (Raffray) (1903, p. 537).....St. Thomas
Trimiovillus Park (1954, p. 11)
**bahamicus* Park (1954, p. 12).....Bahamas
bellingeri Park (1960, p. 17).....Jamaica
Sandersonella Park, n. g.
**transversa* Park, n. sp.....Haiti
Trimiosella Raffray (1898, p. 236)
**anguina* (Reitter) (1883, p. 42).....St. Thomas
Hispanisella Park, n. g.
**haitiana* Park, n. sp.....Haiti
hirsuta Park, n. sp.....Haiti
Allomelba Park (1954, p. 16)
**antennata* Park (1954, p. 17).....Bahamas
Zolium Casey (1897, p. 560)
**eggersi* (Reitter) (1883, p. 38).....St. Thomas
Trimiopsis eggersi, Reitter 1883, p. 38
Zolium eggersi, Casey 1897, p. 562
Melba eggersi, Raffray 1903, p. 562
Allomelba eggersi, Park 1955, p. 116

BRACHYGLUTINI Raffray (1904, p. 108)

DECARTHONINA (Park, 1951, p. 61)

Decarthron Brendel (1865, p. 30)

- spinosum* Raffray (1904, p. 192).....Grenada
insulare Raffray (1904, p. 189).....Grenada
arcuatum Park, n. sp.....Cuba
vauriei Park (1954, p. 20).....Bahamas
pectinale Park, n. sp.....Cuba

EUPSENIINA (Park, 1951, p. 61)

Eupsenius LeConte (1850, p. 90)

- gracilis* Raffray (1904, p. 197).....Grenada
politus Reitter (1883, p. 36).....St. Thomas
pretiosus Park (1960, p. 18).....Jamaica
**glaber* LeConte (1850, p. 90).....U.S.A., Bahamas
dominicanus Schaufuss (1877, p. 108).....Dominican Republic

BRACHYGLUTINA s. str. (Raffray, 1904, p. 108)

Reichenbachia Leach (1826, p. 451)

- grenadensis* Raffray (1904, p. 168).....Grenada
vincentania Raffray (1904, p. 169).....St. Vincent
eucera (Aubé) (1844, p. 120).....Puerto Rico
darlingtoni Park, n. sp.....Cuba
guadelupensis Raffray (1908, p. 38).....Guadeloupe

PSELAPTINA (Park, new subtribe)

Bythinogaster Schaufuss (1887, p. 111)

- nymphoides* Park (1960, p. 22).....Jamaica
parsonsi Park, n. sp.....Cuba
bisphaeroides Schaufuss (1887, p. 297).....Cuba
**simplex* Schaufuss (1878, p. 112).....Hispaniola
diabolicus Park (1960, p. 22).....Jamaica

Berdura Reitter (1881, p. 187; 1883, p. 35)

- leavitti* Park, n. sp.....Cuba
**excisula* Reitter (1883, p. 36).....St. Thomas

Scalenarthrus LeConte (1880, p. 135)

- clavatus* Raffray (1904, p. 127).....Grenada
jamaicensis Park (1960, p. 19).....Jamaica
guadelupensis Raffray (1912, p. 289).....Guadeloupe
tomentosus Park (1960, p. 20).....Jamaica
pectinicornis Raffray (1904, p. 127).....St. Vincent

Pselaptus LeConte (1880, p. 184)

- sternalis* Raffray (1904, p. 208).....Grenada
longiclava (Schaufuss) (1887, p. 126).....Cuba

CTENISTINI (Raffray, 1890a, pp. 140, 141)

Ctenisodes (1896, p. 247)

- ueberi* Park, n. sp.....Cuba

TYRINI (Raffray, 1890a, p. 162)

Ephimia Reitter (1883, p. 34)

- *simoni* Reitter (1882-1883, p. 34).....St. Thomas
cubensis Park, n. sp.....Cuba
subnitida Raffray (1904, p. 312).....Grenada

Neotyrus Raffray (1895, p. 396)

- tobagoensis* Park, n. sp.....Tobago

HAMOTINI (Park, 1951, p. 67)

Apharus Reitter (1882, p. 129)

- hexagonus* Park, n. sp.....Tobago

Hamotus Aubé (1884, p. 92)

- H. (Hamotus)* s. str. Aubé (1884, p. 92)

- soror* Raffray (1904, p. 403).....Venezuela, Trinidad, Tobago

H. (Hamotoides) Schaufuss (1887, p. 298)

hirtus Raffray (1904, p. 408)Grenada, St. Vincent, Guadeloupe

CLAVIGERINAE (Redtenbacher, 1849, pp. 58, 647)

FUSTIGERINI (Jeannel, 1949, p. 31)

Pseudofustiger Reitter (1884, p. 167)

**stricticornis* (Reitter) (1883, p. 33).....St. Thomas

barroi Bierig (1945, p. 15)Cuba

Fustiger Brendel (1866, p. 189)

haytiana Mann (1915, p. 163).....Haiti

smithi Raffray (1904, p. 455)St. Vincent

schwarzi Mann (1918, p. 105)Cuba

jamaicensis Park, n. sp.....Jamaica

TYPE DEPOSITIONS OF NEW SPECIES

Park = Orlando Park collection at Field Museum of Natural History

INHS = Illinois Natural History Survey

MCZ = Museum of Comparative Zoology

Bythinoplectus laminatus Park, male TYPE: Park

Balega longiceps Park, TYPE male: MCZ

Stratus dominicanus Park, TYPE male & 2 PARATYPES: MCZ: 2 PARATYPES: Park

Stratus hirsutus Park, TYPE male: MCZ

Insulomodes tobagoensis Park, TYPE male & 5 PARATYPES: Park

Insulomodes excavatus Park, TYPE male & 9 PARATYPES: Park

Dalmonexus tobagoensis Park, TYPE male & 1 PARATYPE female: Park

Eurhexius incertus Park, TYPE male: Park

Thesium pearcei Park, TYPE male: Park

Thesiastes hopensis Park, TYPE female & 2 PARATYPES: INHS; 1 PARATYPE female: Park

Euplectus gouyavensis Park, TYPE male: Park

Euplectus episcopalis Park, TYPE male: Park

Malleiceps pearcei Park, TYPE male & 2 PARATYPES: Park

Hispanisella haitiana Park, TYPE male & 12 PARATYPES: INHS; 2 PARATYPES: Park

Hispanisella hirsuta Park, TYPE male: INHS

Haasiella medicina Park, TYPE male: Park

Sandersonella transversa Park, TYPE male: INHS

Lemelba millsii Park, TYPE male: INHS

Lemelba hirsuta Park, TYPE female: MCZ

Actium haasi Park, TYPE male: Park

Berdura leavittii Park, TYPE female: MCZ; PARATYPE female: Park

Bythinogaster parsonsi Park, TYPE male: MCZ

Reichenbachia darlingtoni Park, TYPE male: MCZ; PARATYPE male: Park

Decarthron arcuatum Park, TYPE & 4 PARATYPES: MCZ; 4 PARATYPES: Park

Decarthron pectinale Park, TYPE & 5 PARATYPES: MCZ; 5 PARATYPES: Park

Ctenisodes weberi Park, TYPE male: MCZ

Ephimia cubensis Park, TYPE: MCZ

Neotyrus tobagoensis Park, TYPE male: Park

Apharus hexagonus Park, TYPE male: Park

Fustiger jamaicensis Park, TYPE: Park

SUMMARY

The pselaphid beetle fauna of the West Indies is poorly known. This report attempts to summarize our knowledge of the described species together with the descriptions of 30 new species, four new genera, and one new subtribe. Of the 113 species known to date, 25 species, representing 17 genera or subgenera, are recorded from Jamaica which has the largest known pselaphid fauna. This may be a reflection of more intensive Berlese sampling on Jamaica than on any of the other Greater Antillean Islands. All three known subfamilies, Faroninae, Pselaphinae, and Clavigerinae, including 19 tribes and subtribes are represented in the West Indies. Endemicity in the West Indies is very high, type species of 21 or 40 per cent of the 53 West Indian genera and subgenera having been designated from this area. With much collecting remaining to be done, especially on Cuba and Hispaniola, it is premature to speculate on the faunal origins of the genera and tribes in the West Indies. However, as the analysis stands at present, more genera are shared in common with Central and South America than with Mexico and the United States. Shared with Central and South America, each 20 genera; Mexico, 17 genera; United States, 16 genera.

REFERENCES

AUBE, C.

1844. Révision de la famille des Psélaphiens. *Ann. Soc. Entomol. France*, (2), Part II, pp. 73-160.

BIERIG, A.

1945. Nuevos Clavigeridae de Costa Rica y Cuba. *Univ. de Costa Rica, San Jose*, (Edicion especial), pp. 4-15, illus.

BLACKWELDER, R. E.

1936. Morphology of the Coleopterous Family Staphylinidae. *Smithson. Misc. Coll.*, **94** (13), pp. 1-102, illus.
1944. Checklist of the Coleopterous Insects of Mexico, Central America, The West Indies, and South America, Part I. *Bull. 185, Smithson. Inst.*, pp. i-xii, 1-188.

BOWMAN, J. R.

1934. The Pselaphidae of North America. *Pittsburgh, Pa.* (privately publ.), pp. i-vi, 1-149.

BRENDEL, E.

1865. On some new species of Pselaphidae. *Proc. Entomol. Soc. Philadelphia*, pp. 28-32.
1866. Descriptions of some new species of Pselaphidae. *Proc. Entomol. Soc. Philadelphia*, July 1866, pp. 189-194.
1889. Descriptions of Scydmaenidae and Pselaphidae. *Entomol. Amer.*, **5**, pp. 193-197.

CASEY, T. L.

1884. Contributions to the Descriptive and Systematic Coleopterology of North America. Part I, pp. 1-60. Part II, pp. 61-198. *Philadelphia* (privately publ.).
1886. Descriptive notices of North American Coleoptera, Part I. *Bull. Calif. Acad. Sci.*, **2** (6), pp. 157-264.
1887. On some new North American Pselaphidae. *Bull. 8, Calif. Acad. Sci.*, Vol. II. pp. 455-482, pl. 16.
1893. Coleopterological Notices, V. *Ann. New York Acad. Sci.*, **7**, pp. 281-606.
1897. Coleopterological Notices, VII. *Ann. New York Acad. Sci.*, **9**, pp. 285-684.

FLETCHER, F. C.

1928. Pselaphidae collected by Dr. Alfons Dampf in Central America. Ann. Entomol. Soc. Amer., **21**, (2), pp. 203-231, figs. 33.

GRIGARICK, A. A. and R. O. SCHUSTER

1971. A revision of *Actium* Casey and *Actiastes* Casey (Coleoptera: Pselaphidae). Univ. Calif. Press, Berkeley, pp. 1-56.

GROUVELLE, A. and A. RAFFRAY

1908. Supplément a la Liste des Coléoptères de la Guadeloupe. Ann. Soc. Entomol. France, **77**, pp. 33-40.
1912. Supplément a la Liste des Coléoptères de la Guadeloupe. Ann. Soc. Entomol. France, **81**, pp. 289-290.

JEANNEL, R.

1949. Les Psélaphides de l'Afrique Orientale. Mem. Mus. Nat. d'Hist. Nat., N.S., **29** (1), pp. 1-226, figs. 103.
1950. Faune de France, N. 53. Coléoptères Psélaphides, Lechevalier, Paris, pp. 1-421, figs. 169.
1955. Les Psélaphides de l'Afrique Australe. Mem. Mus. D'Hist. Nat., **9**, pp. 1-196, figs. 226.
1962. Les Pselaphides de la Paleantarctide Occidentale. Biol. de L'Amerique Australe, Centre National Investigaciones Cientificas y Technicas, Vol. 1, pp. 295-479.

KUGELANN, J. G.

1794. Verzeichniss derin einigen Gegenden Preussens bei jetzt entdekten. Käfer-Arten. Schneider's Mag., **1** (5), pp. 513-582.

LEACH, W. E.

1817. On the stirpes and genera composing the Family Pselaphidae; with the names of the British species. The Zool. Misc.; being descriptions of new or interesting animals, **3**, pp. 80-87.
1826. On the stirpes and genera composing the Family Pseladphidae; with descriptions of some new species. Zool. Jour., **2**, pp. 445-453.

LECONTE, J. L.

1850. On the Pselaphidae of the United States. Boston Jour. Nat. Hist., **6** (1), pp. 64-110. [Sept. 1849 date on original paper. J.W.—M.W.S.]
- 1863, 1866. Descriptions of new species of North American Coleoptera, Smithson. Misc. Coll., Part I, pp. 1-86 (1863), pp. 87-168 (1866).
1878. Additional descriptions of new species. Proc. Amer. Phil. Soc., **17**, pp. 373-434.
1880. Short studies of North American Coleoptera. Trans. Amer. Entomol. Soc., **8**, pp. 613-218.

MANN, W. M.

1915. Some Myrmecophilous insects from Hayti. *Psyche*, **22** (5), pp. 161-166. Illus.
1918. Myrmecophilous insects from Cuba. *Psyche*, **25** (5), pp. 104-106.

PARK, O.

1942. A study in Neotropical Pselaphidae. (Book). Northwestern Univ. Stud. Biol. Sci. Med., no. 1, pp. x, 403, pls. 21.
1943. A preliminary study of the Pselaphidae (Coleoptera) of Mexico. *Bull. Chicago Acad. Sci.*, **7** (3), pp. 171-226, pls. 3.
1951. Cavernicolous Pselaphid beetles of Alabama and Tennessee, with observations on the taxonomy of the family. *Geol. Surv. Alabama, Mus. Paper* **31**, pp. 1-107, figs. 18.
1952a. A revisional study of Neotropical Pselaphid Beetles. Part I. Tribes Faronini, Pyxidicerini and Jubinini. *Chicago Acad. Sci., Spec. Pub.*, no. 9, pp. 1-49, pls. 3.
1952b. A revisional study of Neotropical Pselaphid beetles. Part II. Tribe Euplectini *sensu latiore*. *Chicago Acad. Sci., Spec. Pub.*, no. 9, pp. 50-150, pls. 7.
1953. A new genus of Pselaphid beetles from the Everglades. *Nat. Hist. Misc.*, no. 121, p. 4.
1954a. The Pselaphidae of South Bimini Island, Bahamas, British West Indies (Coleoptera). *Amer. Mus. Nov.*, no. 1674, pp. 1-25, figs. 22.
1954b. A new genus of Pselaphid beetles from the Antilles. *Nat. Hist. Misc.*, no. 138, pp. 1-4, figs. 3.
1955. Contributions to the Pselaphid beetle fauna of Jamaica. *Bull. Chicago Acad. Sci.*, **10** (7), pp. 101-120, figs. 5.
1960. Pselaphid beetles of Jamaica. *Trans. Amer. Microscop. Soc.*, **79** (1), pp. 5-25, figs. 18.
1964. Observations upon the behavior of Myrmecophilous Pselaphid Beetles. *Pedobiologia*, Bd. 4 (3), pp. 129-137.
1965. Revision of the genus *Batriasymmodes* (Col. Psel.), *Trans. Amer. Microscop. Soc.*, **84** (2), pp. 184-201.

RAFFRAY, A.

- 1890a. Etude sur les Psélaphides: Genera et descriptions d'espèces nouvelles. *Rev. d'Entomol.*, **9**, pp. 1-28, 81-172, 193-219, 264-265.
1890b. Séance du 26 Novembre 1890. (Description d'une nouvelle espèce de psélaphide). *Bull. Soc. Entomol. France*, ser. 6, Vol. **10**, pp. cciv-ccv, 204-205.
1891. Voyage de M. E. Simon au Venezuela (Décembre 1887-Avril 1888). 10 Mémoire. Psélaphides. *Ann. Soc. Entomol. France*, ser. 6, Vol. **10**, pp. 297-330, illus.
1893. Essai Monographique sur la tribu des Faronini (Psélaphiens). *Rev. d'Entomol.*, **12**, pp. 157-196, figs. 65.
1895. Révision du genre *Tryopsis* Saulycy (*Aplodea* Reitter) et description de deux genres nouveaux du même groupe. *Ann. Soc. Entomol. France*, **64**, pp. 391-400.

1896. Nouvelles études sur les Psélaphides et les Clavigerides. Ann. Soc. Entomol. France, **65**, pp. 227-284, pls. 2.
1897. Revision des *Batrisus* et genres voisins de l'Amérique centrale et méridionale. Ann. Soc. Entomol. France, **66**, pp. 431-517. Illus.
1898. Notes sur les Psélaphides. Révision générique de la tribu des Euplectini. Rev. d'Entomol., **17**, pp. 198-274.
- 1903-1904. Genera et catalogue des Psélaphides. Ann. Soc. Entomol. France, **72**, pp. 484-604; **74**, pp. 1-476, 636-658.
1908. Pselaphidae. Genera Insectorum, 64th Fascicule, P. Wytsmann, ed. Bruxelles, pp. 1-487, pls. 1-9.
1909. Nouvelles Espèces de Psélaphides. Ann. Entomol. France, **78**, pp. 15-52, figs. 20.
1911. Pselaphidae. Junk, W., Coleopterorum Catalogus, Part 27, pp. 1-222.
1912. Espèces nouvelles de Psélaphides exotiques (Coléopt.). Ann. Soc. Entomol. France, **80**, 1911 (1912), pp. 425-450, illus.
- REDTENBACHER, L.
1849. Fauna Austriaca, 1st ed, Wien. (2nd. ed. 1858). Die Käfer.
- REICHENBACH, H. T. L.
1816. Monographia Pselaphorum. Lipsiae. pp. 1-80.
- REITTER, E.
1881. Versuch einer systematischen Eintheilung der Clavigerien und Pselaphiden. Verh. Natur. Ver. Brunn, **20**, pp. 177-211.
1882. Neue Pselaphiden und Scydmaeniden aus Brasilien. Deut. Entomol. Z., **26** (1), pp. 129-152, figs. 11.
1883. Beitrag zur Kenntniss der Clavigeriden, Pselaphiden und Scydmaeniden von Westindien. Deut. Entomol. Z., **27**, pp. 33-46.
1884. Ueber die bekannten Clavigeriden-Gattungen. Deut. Entomol. Z., **28**, pp. 167-168.
1890. Coleopterologische Notizen XXXVIII. Wien. Entomol. Zeit., **9**, pp. 210-213.
1897. Zehnter Beitrag zur Coleopteren Fauna von Europa und den angrenzenden Ländern. Wein. Entomol. Zeit., **16**, pp. 203-206.
- ROBERTS, W. A.
1940. The Caribbean. The story of our destiny. Bobbs-Merrill, Indianapolis, Indiana. IX. 361 pp.
- SCHAUFUSS, L. W.
- 1872a. Beschreibung einiger Pselaphiden. Nunquam Otiosus, Dresden, **2**, pp. 259-274.
- 1872b. Ueber Pselaphidengattungen. Nunquam Otiosus, Dresden, **2**, pp. 450-460.

1886. Beschreibung neuer Pselaphiden aus der Sammlung des Museum Ludwig Salvator. Ein Beitrag zur Fauna Brasiliens, der Kgl. Niederländischen Besitzungen in Indien und Neuhollands. Tijdschr. Entomol., **29**, pp. 241-296. Illus.

1887a. Beschreibung neuer Pselaphiden aus der Sammlung des Museum Ludwig Salvator. Ein Beitrag zur Fauna Brasiliens, der Kgl. Niederländischen Besitzungen in Indien und Neuhollands. Tijdschr. Entomol., **30**, pp. 91-165. Illus.

1887b. Über Pselaphiden und Scydmaeniden des Königl. zoologischen Mus. zu Berlin und verwandte Arten. Berlin. Entomol. Z., Bd. **31**, Heft II, pp. 287-320.

SHARP, D.

1887. Pselaphidae. Biologia Centrali-Americana. Coleoptera, **2**, Part I, pp. 1-46, pl. 1.

TANNER, V. M.

1927. A preliminary study of the genitalia of female Coleoptera. Trans. Amer. Entomol. Soc., **53**, pp. 5-50.

WAGNER, J. A.

1975. Review of the Genera Euplectus, Pycnoplectus, Leptoplectus, and Acolonia (Coleoptera: Pselaphidae) Including Nearctic Species North of Mexico. Entomol. Amer., New York, **49** (2), pp. 125-207, figs. 1-74.

INDEX TO THE SUBFAMILIES, TRIBES, SUBTRIBES AND GENERA FOR THE SYSTEMATIC SECTION, KEYS, AND FIGURES

Major text references are in boldface, and figure references are in italics.

Achillia, 56
Actium, keys-29 and 42, 37, 42
Allomelba, key-29, 38, 45
Apharus, 65, key-69, 69
Aplodea, 68

Balega, 7, key-8, 8
Berdura, key-49, 49, 50
Biblomimus, key-24, 24
Bibloporina, key-19, 24
Brachyglutina, key-48, 55
Brachyglutini, 6, keys-7 and 47, 47
Bryaxis, 6
Buris, key-18, 19
Bythinogaster, 6, keys-49 and 53, 50, 52
Bythinophysis, key-18, 19
Bythinoplectus, 5

Caccoplectus, 4
(*Cismelba*), key-45, 47
Clavigerinae, key-4, 72
Coptotermes, 69
Ctenisodes, 64, 65, 70
Ctenistini, key-7, 64, 66

Dalmodes, 19
Dalmodiina, keys-12 and 13
Dalmomelba, key-28, 35
Dalmonexus, key-13, 17
Dalmosella, 36
Decarthron, 58, key-59, 61
Decarthronina, key-47, 58

Ephimia, key-66, 66, 70
Euharmophola, key-13, 17
Euplectina, keys-19 and 24, 24
Euplectini, keys-7 and 19, 19
Euplectus, keys-24 and 26, 26
Eupseniina, 47, 62
Eupsenius, 62, key-63
Eurhexius, key-20, 20

Faroninae, 4
Faronini, 4
(*Frontelba*), key-46, 46
Fustiger, 70, keys-72 and 73, 73
Fustigerini, key-72, 72

Haasiella, key-28, 35, 37
Hamotini, keys-7 and 69, 69
(*Hamotoides*), key-69, 72
Hamotus, 65, key-69, 71
Hanfordia, 19, key-28, 40
Hispanisella, keys-29 and 32, 32, 35, 37
Hybocephalini, 66

Insulomodes, key-13, 13, 13

Jubinini, keys-7 and 8, 7
Jubus, 7, 8, key-12, 12
Juxtahamotopsis, 66

Latomelba, 19, keys-29 and 44, 32, 38, 44
Lemelba, keys-28 and 40, 36, 37, 40

Malleiceps, keys-28 and 29, **29**, 31
Melba, keys-29 and 45, 45
 (*Melba*), 46

Neotyrus, 65, key-66, 67, 70

Odontalgini, 66

Panaphantina, keys-19 and 22, 21
 (*Perimelba*), keys-46 and 47, 47
Pselaphinae, keys-4 and 6, 4
Pselaptus, 48, keys-49 and 51, 50, 51
Pselaptina, keys-48 and 49, 48
Pseudofustiger, key-72, 72
Pycnoplectus, 27
 Pyxidicerini, key-4, 5

Quadrelba, keys-29 and 44, 38, 44

Ramelbida, key-29, 31, 40
 (*Rameloidea*), key-45, 46
Reichenbachia, 54, 56, key-57

Rhexinia, key-20, 21
Rhinoscepsina, key-19, 20
Rhinoscepsis, 20

Sandersonella, key-29, 37, 38
Scalenarthrus, keys-49 and 51, 51
Stratus, 7, 10, key-10

Tanypleurina, keys-12 and 18, 18
 Tanypleurini, keys-7 and 12, 12
Thesiastes, keys-24 and 25, 24
Thesiectus, key-22, 22
Thesium, key-22, 22, 23
Triangusella, 32
 Trimiina, keys-20 and 28, 28
Trimiosella, key-29, 32, 35
Trimiovillus, keys-29 and 45, 45
Trogastrina, keys-19 and 20, 20
 Tyrini, keys-7 and 66, 66

Zolium, key-29, 45

INDEX TO SPECIES FOR THE SYSTEMATIC SECTION, KEYS, AND FIGURES

Major text references are in boldface, and figure references are in italics.

absoluta Park (*Hanfordia*), 40
acuta Park (*Triangusella*), 32
acutangulus Raffray
 (*Bythinoplectus*), key-5
affabilis Park (*Thesium*), key-22
anguina (Reitter) (*Trimiosella*), 35
antennalis Park (*Thesium*), key-22
antennata Park (*Allomelba*), 45
arcuatum Park (*Decarthron*), key-60,
 60, 61
armipes Raffray (*Apharus*), 71

bahamicus Park (*Bythinogaster*),
 key-5
bahamicus Park (*Trimiovillus*), key-45

barroi Bierig (*Pseudofustiger*), key-72
belfragei LeConte (*Pselaptus*), 48, 51
bellingeri Park (*Caccoplectus*), 5
bellingeri Park (*Trimiovillus*), key-45
bisinuata Schaufuss (*Bryaxis*), 56
bisphaeroides Schaufuss
 (*Bythinogaster*), key-53, 54

carinata Park (*Euharmophola*), 17
cazieri Park (*Dalmomelba*), 35
clavatus Raffray (*Jubus*), 12
clavatus Raffray (*Scalenarthrus*),
 key-51
clypeata Reitter (*Melba*), key-46
coptocolus Park (*Neotyrus*), 69

cornutum Park (*Thesium*), key-29
crassipes Raffray (*Melba*), key-46
cubensis Park (*Ephimia*), key-67, 67,
 70

darlingtonia Park (*Reichenbachia*),
 key-57, 57, 59
davisi Park (*Lemelba*), key-40, 40
diabolicus Park (*Bythinogaster*),
 key-53, 54
dominicanus Park (*Stratus*), key-10,
 10
dominicanus Schaufuss (*Eupsenius*),
 63

eggersi (Reitter) (*Zolium*), 45
elegans (Reitter) (*Balega*), key-8
ensipes (Raffray) (*Buris*), 19
episcopal Park (*Euplectus*), key-26,
 27, 28

eucera Aubé (*Reichenbachia*), 54,
 key-57, 59
excavatus Park (*Insulomodes*),
 key-14, 16
excisa Schaufuss (*Achillia*), 56
excisula Reitter (*Berdura*), key-49, 49,
 50
exiguus Raffray (*Euplectus*), key-26

fleutiauxi (Raffray) (*Melba*), 47
foveatus Reitter (*Bythinoplectus*),
 key-5
frontalis Raffray (*Melba*), key-46
frontalis Park (*Thesium*), 22

gibbicollis (Schaufuss) (*Neotyrus*), 68,
 69
gibbula Reitter (*Melba*), key-47
glaber LeConte (*Eupsenius*), key-63,
 62
gouyavensis Park (*Euplectus*), key-26,
 26
gracilis Raffray (*Eupsenius*), key-63
grenadensis Raffray (*Melba*), key-46
grenadensis Raffray (*Reichenbachia*),
 key-57, 59

guadelupensis Raffray
 (*Reichenbachia*), key-57, 59
guadelupensis Raffray
 (*Scalenarthrus*), key-51

haasi Park (*Actium*), 37, key-43, 43
haitiana Park (*Hispanisella*), key-32,
 33, 35
hambletoni Park (*Eurhexius*), 21
harem Park (*Neotyrus*), 69
haytiana Mann (*Fustiger*), key-73
hexagonus Park (*Apharus*), 65, 69, 71
hirsuta Park (*Hispanisella*), key-32,
 34, 37
hirsuta Park (*Lemelba*), 37, key-40, 41
hirsutus Park (*Stratus*), key-10, 11, 13
hirtus Raffray (*Hamotus*), 72
hoffi Park (*Melba*), key-47
hopensis Park (*Thesiastes*), key-25, 25
humilis (Raffray) (*Bythinophysis*), 19

illepidus Raffray (*Euplectus*), key-29
impressa Raffray (*Biblomimus*),
 key-24
incertus Park (*Eurhexius*), 20, 21
inconspicua (Reitter) (*Quadrelba*),
 key-44
insulare Raffray (*Decarthron*), key-60
insularis Park (*Rhinoscepsis*), 20
insularis Raffray (*Euplectus*), key-26
insularis Raffray (*Jubus*), 12
intermedia Park (*Balega*), key-8, 9

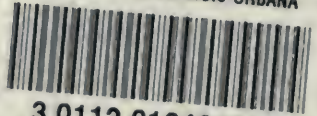
jamaicaensis Park (*Fustiger*), 70,
 key-73, 73
jamaicaensis Park (*Melba*), key-47
jamaicaensis Park (*Scalenarthrus*),
 key-51

laminatus Park (*Bythinoplectus*),
 key-5, 5
laticeps Raffray (*Ctenisodes*), 64, 65
leavitti Park (*Berdura*), key-49, 49, 50
liliputanus Raffray (*Thesiastes*),
 key-25





UNIVERSITY OF ILLINOIS-URBANA



3 0112 018406899